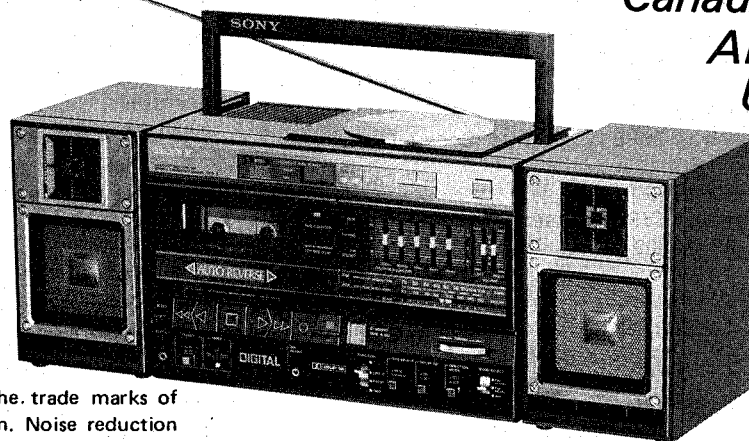


CFD-5

SERVICE MANUAL

US Model
Canadian Model
AEP Model
UK Model
E Model
AD11



'Dolby' and the double-D symbol are the trade marks of Dolby Laboratories Licensing Corporation. Noise reduction system manufactured under license from Dolby Laboratories Licensing Corporation.

SPECIFICATIONS

Tape Transport Mechanism Tape MF-CFD5-73

CD player section

System	Compact disc digital audio system
Disc	Compact disc
Laser diode properties	Material: GaAlAs Wavelength: 780 nm Emission duration: Continuous Laser output: Max. 0.4 mW* *This output is the value measured at a distance of about 1.6 mm from the objective lens surface on the optical pick-up block.
Spindle speed	200 r.p.m. to 500 r.p.m.(CLV)
Scan velocity	1.2-1.4 m/sec.
Error correction	Sony Super Strategy Cross Interleave Read Solomon Code
Number of channels	2
D-A conversion	16-bit linear
Frequency response	20-20,000 Hz $\pm \frac{1}{3}$ dB
Harmonic distortion	0.008% (1 kHz)
Dynamic range	90 dB (1 kHz)
Channel separation	85 dB (1 kHz)
Wow and flutter	Below measurable limit
Disc	
Track pitch	1.6 μ m
Sampling frequency	44.1 kHz
Quantization	16 bit linear quantizing/channel
Modulation system	EFM
Transfer rate	2.03 Mbit/sec. (before modulation)

Radio section

Frequency range	FM: 87.6-107 MHz (the model for West Germany) 87.6-108 MHz (the model for other countries) AM: 530-1,605 kHz (566-187 m)
Antennas	FM: Telescopic antenna AM: Built-in ferrite bar antenna

— Continued on page 2 —

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET UNE MARQUE  SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

COMPACT DISC/FM/AM
STEREO CASSETTE-CORDER
SONY



TC

Tape recorder section and general

Recording system	4-track 2-channel stereo
Fast winding time	Approx. 1 min. 50 sec. with Sony cassette C-60
Frequency response	DOLBY NR OFF • with TYPE IV cassette (Sony METAL-ES) 40-15,000 Hz • with TYPE I cassette (Sony HF-S) 40-14,000 Hz
Speakers	Two-way APM woofer: 77 cm ² , flat diaphragm Tweeter: 5 cm dia., cone type
Power output	4W + 4W at dc operation 5W + 5W (at 10% harmonic distortion) at ac operation
Inputs	One mixing microphone input jack (minijack) sensitivity 2.7 mV for low impedance microphone Two line input jacks (phono jack) sensitivity 0.44 V input impedance 47 kilohms
Outputs	Two line output jacks (phono jack) load impedance 10 kilohms or higher rated output 0.28 V (-8.2 dB) at load impedance 47 kilohms Two external speaker terminals for 4-ohm to 8-ohm impedance speaker Headphones jack (stereo minijack) for 8-300-ohm impedance headphones
Power requirements	The model for United Kingdom: 240 V ac, 50 Hz The model for European countries: 220 V ac, 50 Hz The model for other countries: 110, 120, 220 or 240 V ac adjustable, 50/60 Hz 12V dc, 8 (size D) batteries, IEC designation R20 DC IN 12V jack accepts: DCC-16AE car battery cord (optional) for use on 12V car battery
Power consumption	The model for United Kingdom: 45 W The model for other countries: 40 W
Battery life	Approx. 7 hours (recording) Approx. 5.5 hours (playback) with Sony New Super batteries SUM-1 (NS) Approx. 12 hours (recording) Approx. 9 hours (playback) with Sony Eveready AM1 alkaline batteries
Dimensions	Approx. 556 × 203 × 196 mm (w/h/d) (22 × 8 × 7 ³ / ₄ inches) incl. projecting parts and controls with the carrying handle pushed down
Weight	Approx. 7.8 kg (17 lb 4 oz) incl. batteries

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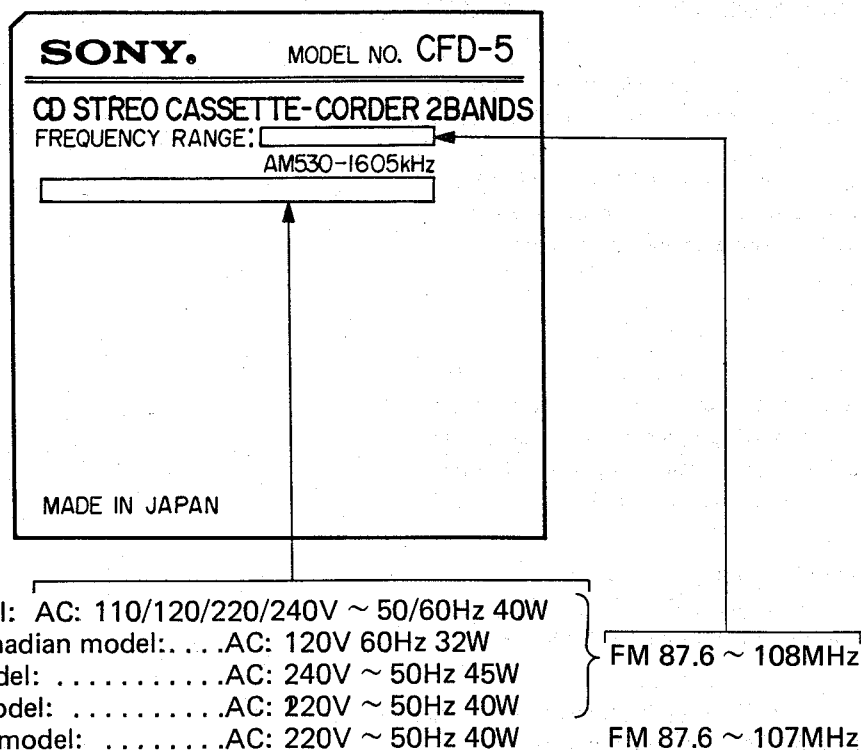
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MODEL IDENTIFICATION

— Model Number Labels —


FEATURES
CD player section
High performance and fidelity

Flat frequency response (20-20,000Hz), low wow and flutter (lower than the measurable limit), wide dynamic range (90 dB), minimal distortion (0.008%) and high channel separation (85 dB) are achieved. Listening to the sound reproduction of your CD player is just like being in the concert hall.

Full-logic "feather touch" operation

At the lightest touch, the "feather-touch" function keys enable you to switch directly from one mode to another.

AMS and SEARCH function

The AMS (Automatic Music Sensor) function for locating the beginning of a selection on the disc and the SEARCH function for locating the desired point in a particular selection.

Digital readout display

The track number and the playing time elapsed of the selection playing is shown on the LCD (Liquid Crystal Display) window. With one touch of the REMAIN key, this time display will change to indicate with a minus sign how many selections and how much playing time are left on the disc.

Non-contact signal readout system

Because a laser beam is employed for signal pick-up, there is no physical contact with the disc, which means no wear.

In addition, because the pit pattern is recorded below the surface of the disc, it is not necessary to be constantly on guard against dust, making the disc easy to handle.

Radio/cassette-corder section
Synchro dubbing function

With a press of a key, playback of a compact disc and recording on a cassette can be started.

Auto-reverse function

You can record on both sides of the cassette and repeat playback of both sides of the cassette continuously, without turning the cassette over.

Others

- Dolby noise reduction system reduces tape hiss noise.
- 5-band graphic equalizer controls facilitate fine tone adjustment.
- Tape select switch allows you to make optimum recording with standard tapes as well as high-performance metal tapes.
- Two-way speaker system provides dynamic sound.
- Timer switch is provided to turn the set on and off at times preset on an optional timer.

SAFETY CHECK-OUT (US Model)

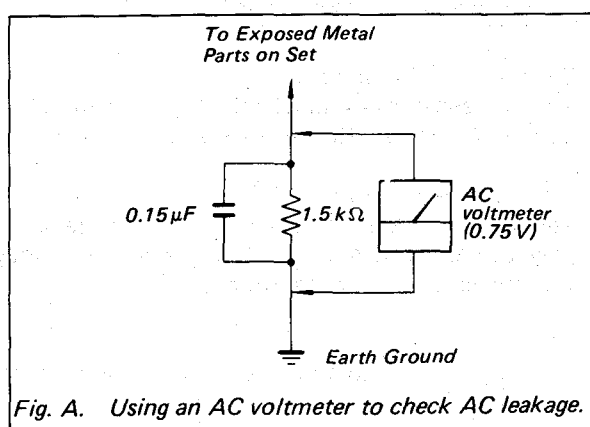
After correcting the original service problem, perform the following safety check before releasing the set to the customer:

Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)



SECTION 1 OUTLINE

1-1. PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs a laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING !!

DO NOT LOOK AT THE LASER BEAM.

1. Laser Diode Properties

- Materiale: GaAlAs
- Wavelength: 780 nm
- Emission Duration: continuous
- Laser Output: max. 0.4 mW*

* This output is the value measured at a distance of about 1.6 mm from the objective lens surface on the Optical Pick-up Block.

- Classification: Class IIIb

2. During service, do not take the Optical Pick-up Block apart, and do not adjust the APC circuit in the Optical Pick-up Block. If there is a breakdown in the APC circuit (including laser diode) in the Optical Pick-up Block, replace the entire Optical Pick-up Block (including APC board).

BESKYTTELSE AF ØJNE MOD LASERSTRÅLING UNDER SERVICE

I dette apparat anvendes laserlys. Derfor skal nedenstående instruktioner nøje følges under service.

ADVARSEL!!

Sø ikke direkte på laserstrålen.

1. Laser-diode data

- Materiale: GaAlAs
- Bolgelængde: 780 nm
- Udsendelsesvarighed: Kontinuerlig
- Laseroutput: Max. 0,4 mW*

* Dette output er værdien målt i en afstand af ca. 1,6 mm fra den optiske pick-up enheds linse-overflade.

- Klassifikation: Klasse IIIb.

2. Adskil aldrig den optiske pick-up enhed under service, og juster ikke APC kredsløbet i den optiske pick-up enhed (Automatic Power Control). Hvis APC kredsløbet i den optiske pick-up enhed (inkl. laser-dioden) bryder ned, skal hele den optiske pick-up enhed udskiftes.

1-2. NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK (KSS-110A)

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body. The printed matter below is included in the repair parts. During repair, use the procedure in the printed matter.

The flexible board is easily damaged and should be handled with care.

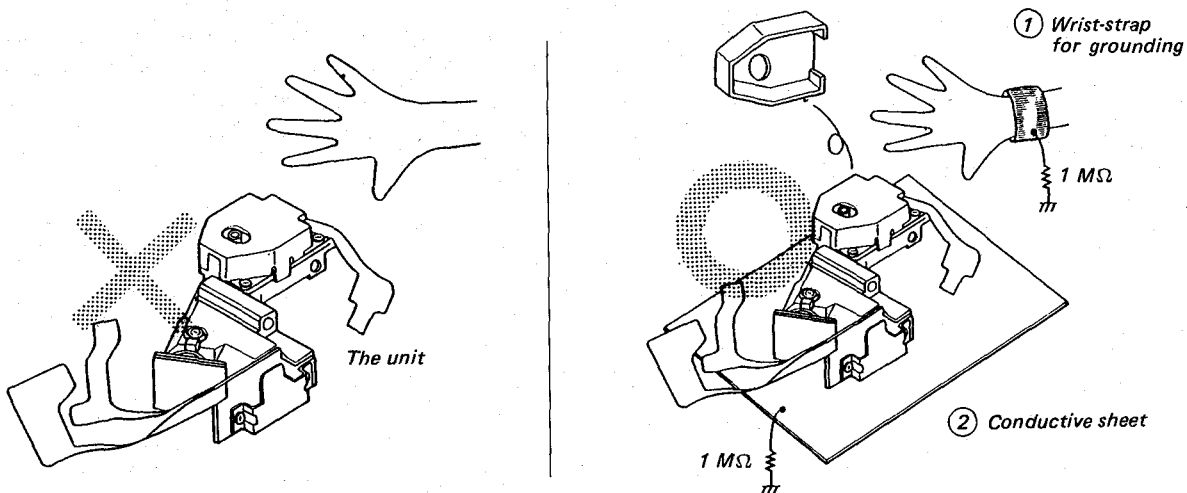
The following method is an example for reference purposes:

1. Place a conductive sheet on the workbench. (The black sheet used as repair parts wrapping).
2. Place the set on the conductive sheet so that the chassis touches the sheet. (This makes it the same potential as the conductive sheet).
3. Place your hands on the conductive sheet. (This makes them the same potential as the sheet).
4. Remove the optical pick-up block.
5. Perform work on top of the conductive sheet. Be careful that clothing does not touch the optical pick-up block.

Printed Matter Included in the Repair Parts

When opening or repairing the unit, the procedure for grounding as follows is required to prevent damage caused by static electricity.

1. Grounding for the human body
Be sure to put on a wrist-strap for grounding (with impedance lower than $10^8 \Omega$) whose other end is grounded. The strap works to drain away the static electricity build-up on the human body.
2. Grounding for the work table
Be sure to lay on the table a conductive sheet (with impedance lower than $10^9 \Omega$) such as sheet of copper, which is grounded.
3. As static electricity build-up on clothes is not drained away, be careful not to let your clothes touch the unit.
4. Handling the flexible board
The flexible board is easily damaged and should be handled with care.



1-3. Chip Component Indications

Chip Component Indications

The official specifications which are presently indicated are EIAJ standard.

- (1) MELF (leadless): EIAJ RC-8001
- (2) Square chip components (laminated ceramic): EIAJ RC-3699. Square chip resistors are presently under study by EIAJ.

The following explanation covers square chip components (MELF omitted).

1. 2-letter Method (EIAJ RC-3699)

- Letter combination: letter + 1 number
- Letter meaning: letter = effective numeric
number = multiplier

* The units used are pF for capacitors and Ω (ohm) for resistor.

(This is mainly used for Symbol and Numeric and Multiplier capacitors.)

Letter	A	B	C	D	E	F	G	H	J	K	L
Numeric	1	1.1	1.2	1.3	1.5	1.6	1.8	2	2.2	2.4	2.7
Letter	M	N	P	Q	R	S	T	U	V	W	X
Numeric	3	3.3	3.6	3.9	4.3	4.7	5.1	5.6	6.2	6.8	7.5
Letter	Y	Z	a	b	d	e	f	m	n	t	y
Numeric	8.2	9.1	2.5	3.5	4	4.5	5	6	7	8	9

Number	0	1	2	3	4	5	6	7	8	9
Multiplier	10^0	10^1	10^2	10^3	10^4	10^5	10^6	10^7	10^8	10^{-1}

- Ex.: A1 $1 \times 10^1 = 10 \text{ pF}$ (or, 10Ω)
E3 $1.5 \times 10^3 = 1500 \text{ pF}$ (or, $1.5 \text{ k}\Omega$)

2. 3-number Method

(Mainly used for chip resistors)

- Number meaning:
1st and 2nd number = effective numeric
3rd number = multiplier of 10
Unit: pF for capacitor, for resistor
- Ex.: 103 $10 \times 10^3 = 10000\Omega = 10 \text{ k}\Omega$
(or, $0.01 \mu\text{F}$)
224 $22 \times 10^4 = 220000\Omega = 220 \text{ k}\Omega$
(or, $0.22 \mu\text{F}$)

3. 4-letter Method (used for capacitor)

- Letter combination: 3 numbers + 1 letter
- Letter meaning: number = effective numeric + multiplier of 10
(same as 3-number method)
letter = capacitor response
- Symbol and Response

< For temperature compensation >

Symbol	C	P	R	S	T	U	(NO)
Response	C Δ	P Δ	R Δ	S Δ	T Δ	U Δ	SL

Δ is temperature coefficient tolerance, and is G, H, J, K.

< For high dielectric constant >

Symbol	K	Z
Response	B	F

- Ex.:

47 3Z	$\Rightarrow 47 \times 10^3 = 47000 \text{ pF} = 0.047 \mu\text{F}$	F response
15 1R	$\Rightarrow 15 \times 10^1 = 150 \text{ pF}$	R Δ response
22 2	$\Rightarrow 22 \times 10^2 = 2200 \text{ pF}$	SL response

1-4. Replacing chip components

All chip components should be connected and disconnected, using a tapered soldering iron [temperature of the iron tip: less than 280°C (536°F)], a pair of tweezers and braided wire.

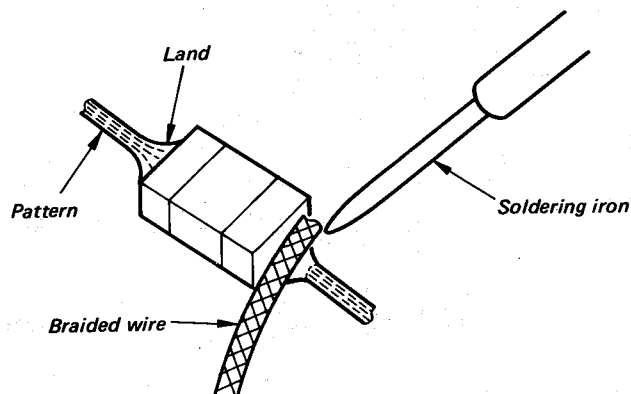
Precautions for replacement

1. Do not disconnect the chip component forcefully. Otherwise, the pattern may peel off.
2. Never re-use a disconnected chip component. Dispose of all old chip components.
3. To protect the chip component, heating time for attaching the component should be within 3 seconds.

○ Removing chip components

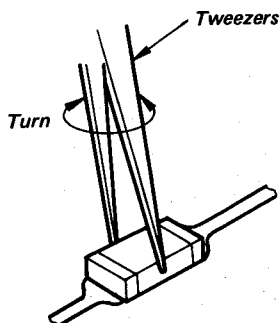
(1) Removing solder at electrode

Remove the solder at the electrode, using a thin braided wire. Do not remove the solder of the part (chip component) attached adjacent to the electrode.



(2) Disconnecting chip components

Turn the tweezers with the soldering iron alternately applied to both electrodes, and the chip component will be disconnected. Take careful precautions while disconnecting, because if the chip component is forcefully removed the land may peel off. Never re-use a disconnected chip component.



(3) Smoothing the soldered surface

After disconnecting the chip component, remove the solder by using a braided wire to smooth the land surface.

○ Connecting chip components

The value of chip components is not displayed on the main body. Take due precautions to avoid mixing new chip components with other ones.

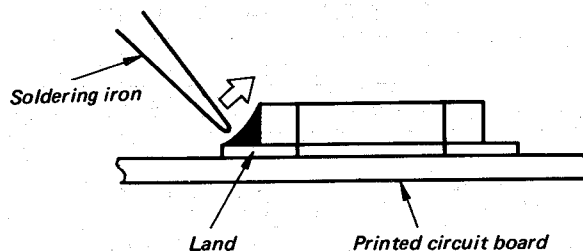
(1) Applying solder to land on one side

Apply a thin layer of solder to the land on one side where the chip component is to be connected. Too much solder may cause bridging.



(2) Speedy soldering

Hold the chip component at the desired position, using tweezers, and apply the soldering iron in the arrow-marked direction. To protect the chip component, heating time should be within 3 seconds.



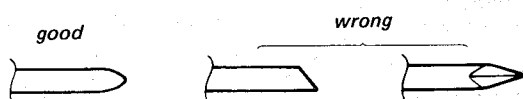
(3) Speedy soldering of electrode on the other side

Solder the electrode on the other side in the same way as in (2) above.

1-5. Flexible Circuit Board Repairing

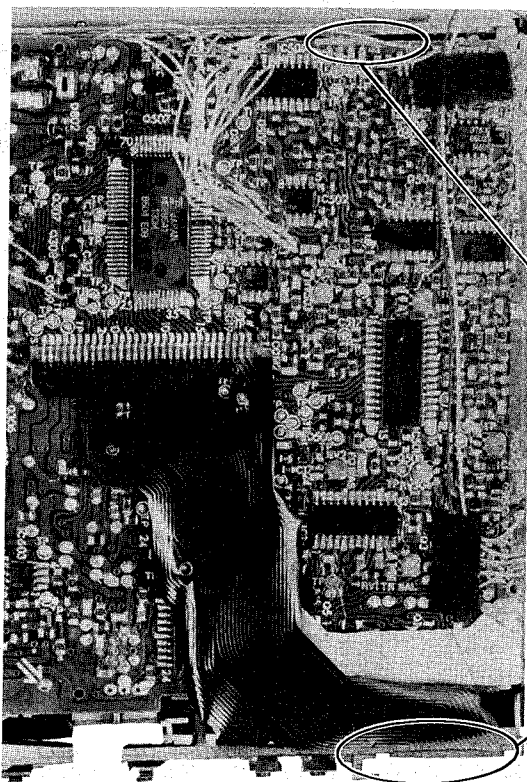
1. Keep the temperature of the soldering iron at $270^{\circ} \pm 10^{\circ}\text{C}$ during repairing.
You can maintain the temperature of the soldering iron around 270°C by using the thermal controller as illustrated on the right.
2. Do not touch the soldering iron more than 4 seconds or 3 times on the same conductor of the circuit board.
3. Do not apply force on the conductor when soldering or unsoldering.

Tip of soldering iron



1-6. NOTES ON OPENING MAIN BOARD OF CD SECTION

Be careful not to cut the FOP flexible boards when opening the main board during repair. If they break, FOP should be replaced.



1-7. CAUTION ON DC-DC CONVERTER REPLACEMENT

Be sure to check PLL free run frequency when replacing the DC-DC converter. (Refer to page 57)
DC-DC converter -5V output voltage changes when the DC-DC converter is replaced, causing PLL free run frequency to change.

Reference:

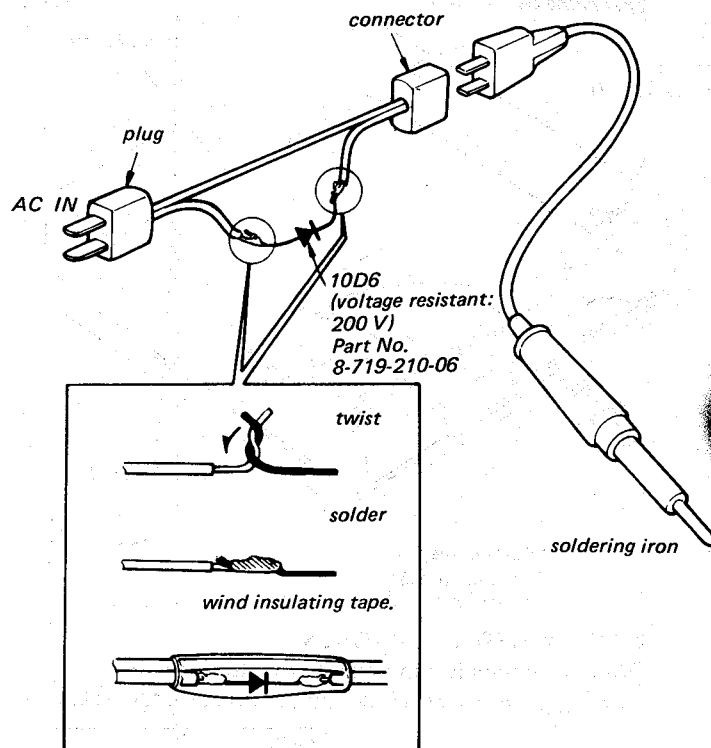
Converter Output Voltage Variation

Conditions	Specifications
Input voltage	+5 V output: $\text{DC} +5.2\text{ V} \pm 50\text{ mV}$
DC +5 - 12 V	-5 V output: $\text{DC} -5.2\text{ V} \pm 50\text{ mV}$

Be careful not to break the flexible board which is attached to the end of this board. (connected to FOP 2-axis device)

Be careful not to break the flexible board under this shield board. (connected to FOP signal and laser)

To make thermal controller of soldering iron



1-8. CD SECTION

SERVICE MODE (service program) FOR CD SECTION

As shown in Figure 1, the program on this set selects either service program routine or normal routine after power supply is connected and a RESET signal enters. When it enters service program routine, the microcomputer brings the necessary job from each subroutine corresponding to the key input, and executes that job. Operation check can be performed efficiently using this mode. The operation method of service mode is explained below.

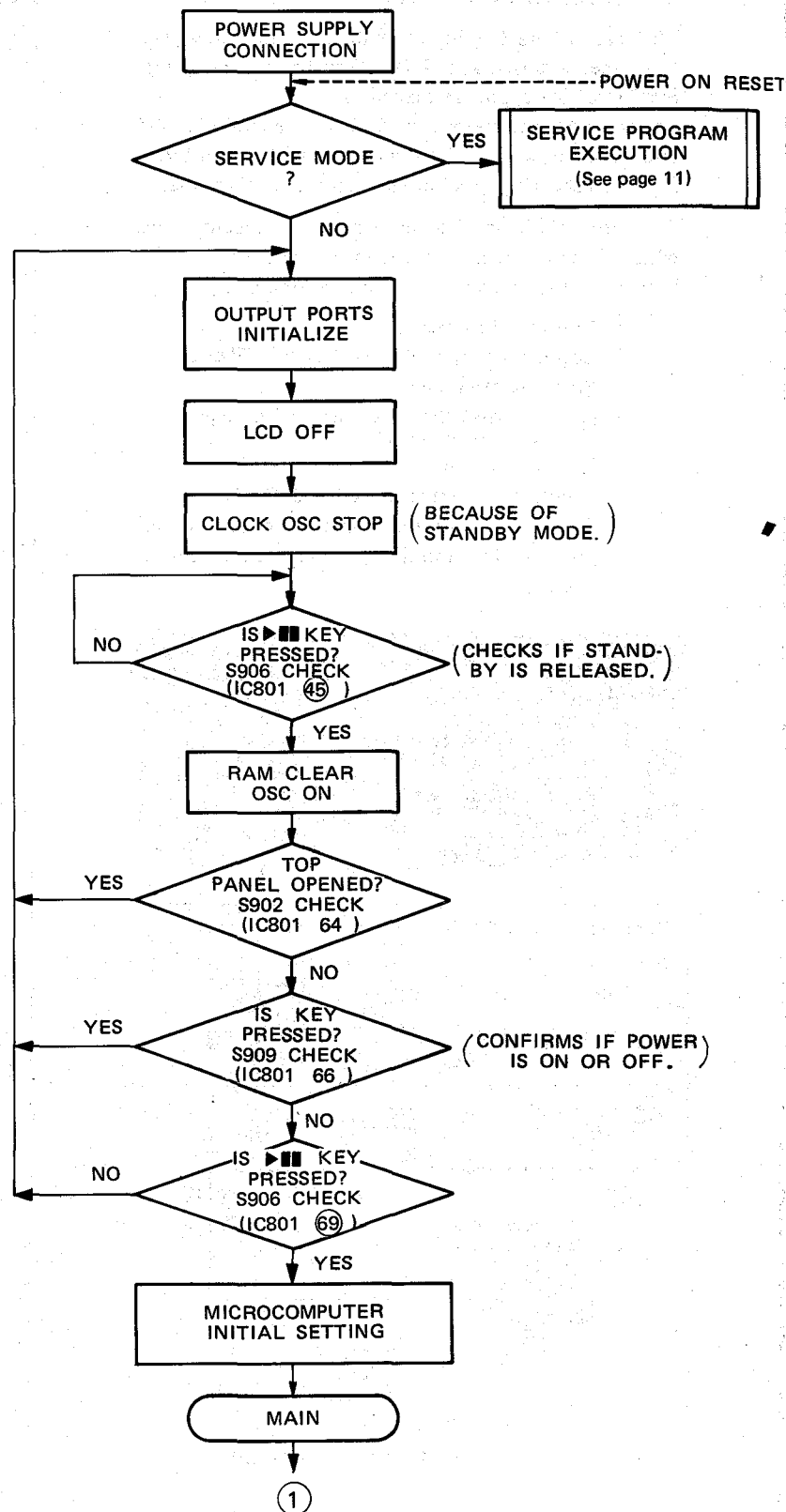
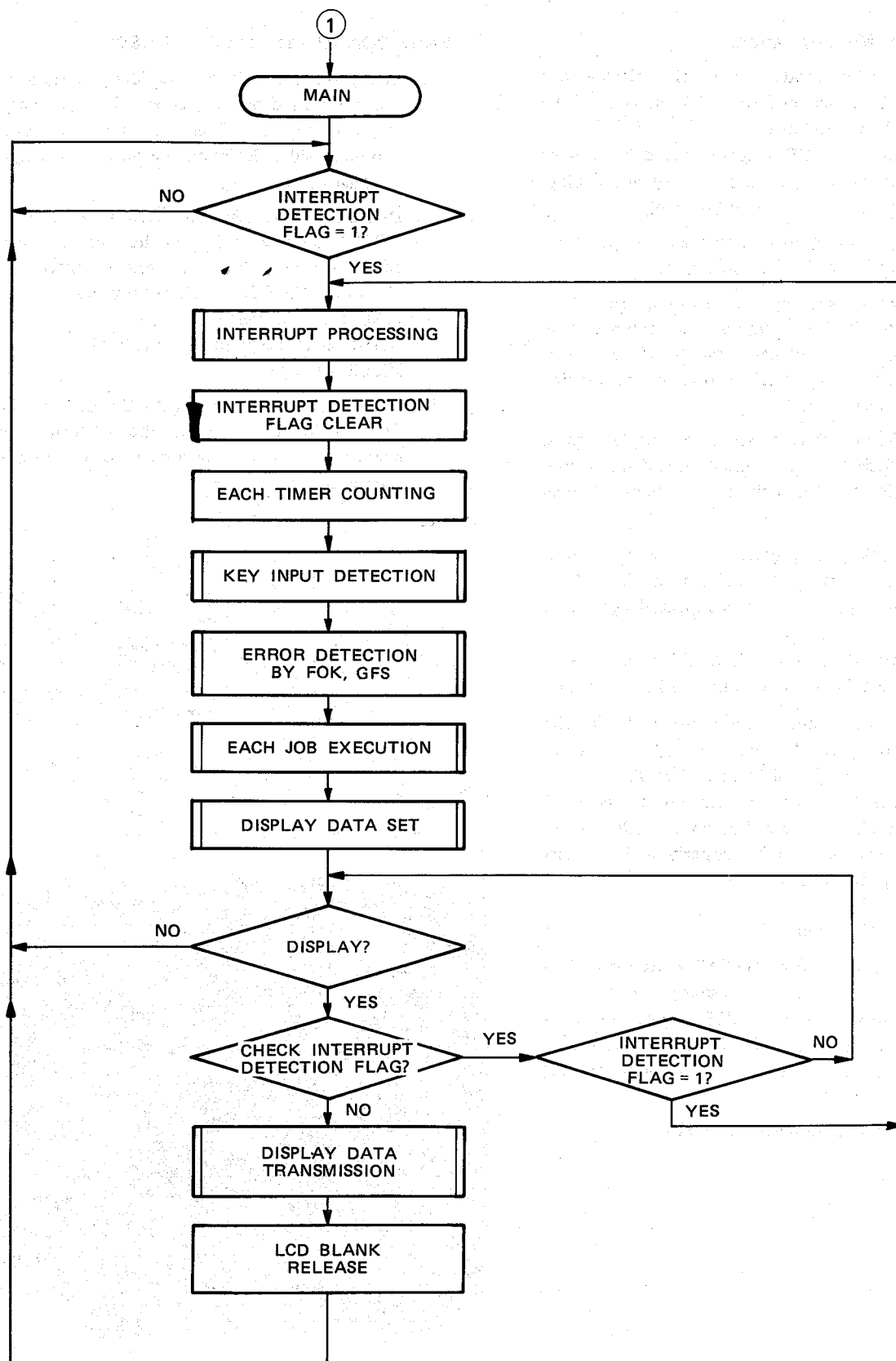


Figure 1. Progr



im Flow Chart

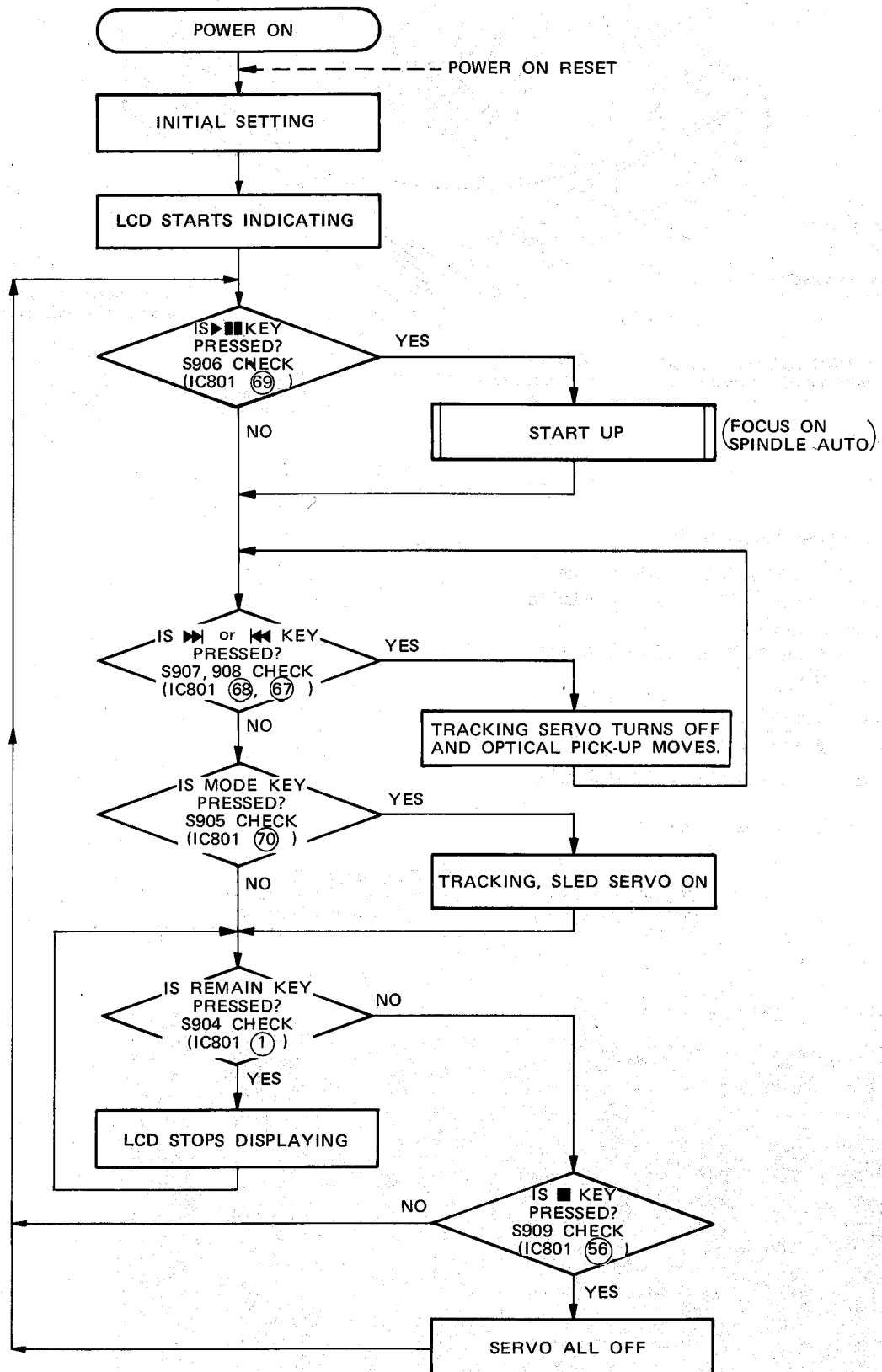


Fig. 1-1 Service Program Flow Chart

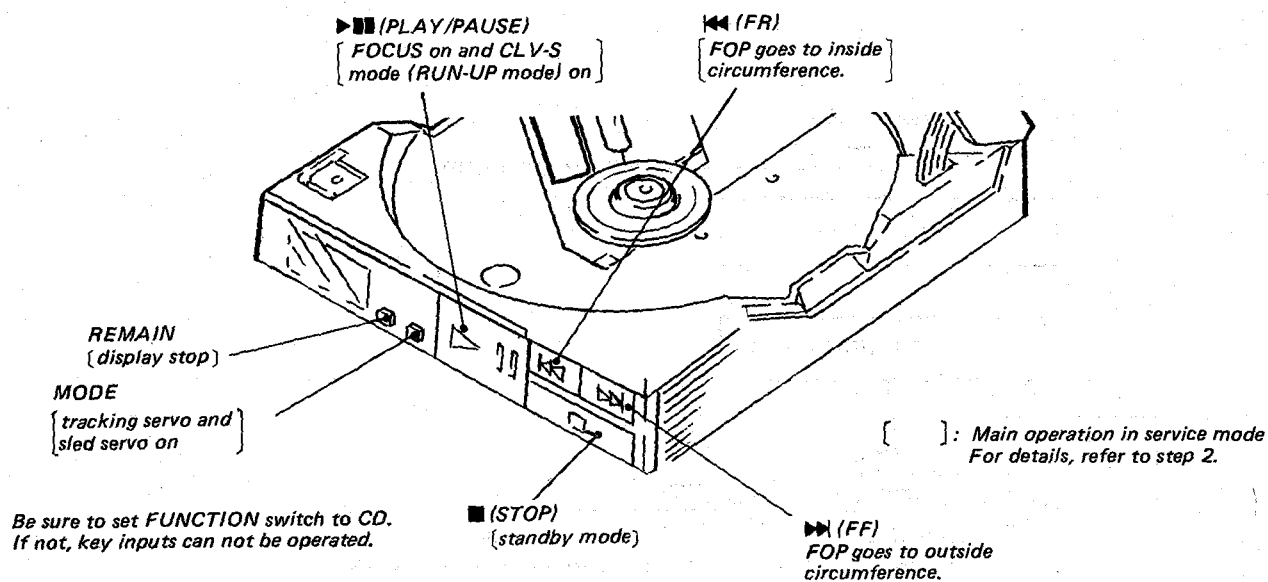


Fig. 2 Key Positions

Step 1 (Service Mode setting method)

1. Turn the FUNCTION switch to CD with the POWER switch turned off (no power applied to set) and press the ▶▶ key.
(This is to discharge C803 connected to IC801 pin ⑧ (PRESET).)
2. Solder jumper BATT2 point.
(IC801 pin ⑤ (BATT-E) pin is grounded.)
3. Put batteries in the set and turn POWER switch ON.
This puts the set into service mode.

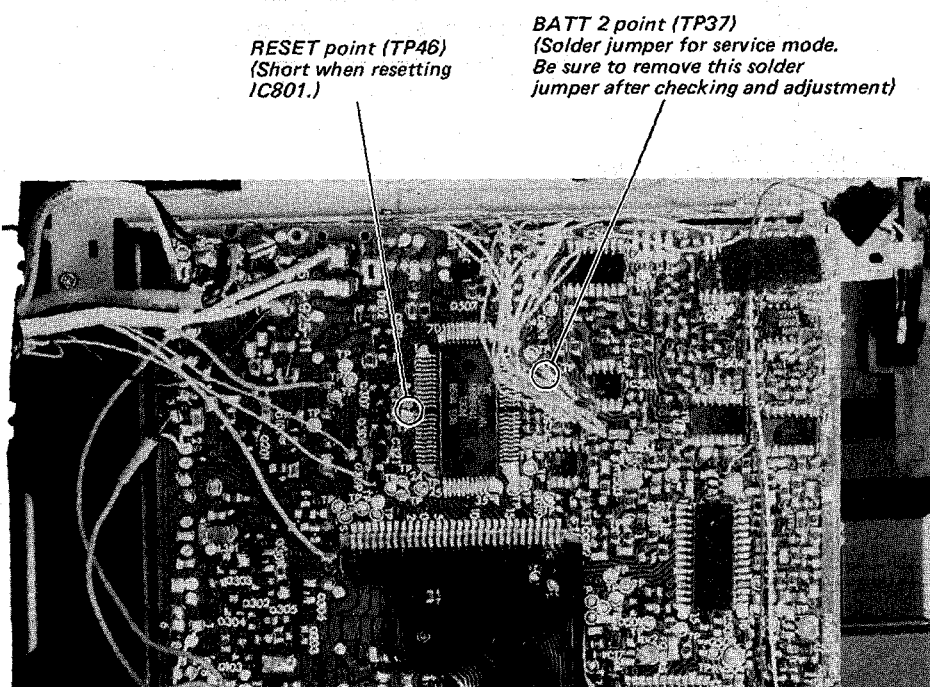


Fig. 3 BATT2 point, RESET point Positions

Step 2 (Service Mode operation)

1. When service mode is set, the display will change 16 times, and those 16 changes will be repeated over and over.
With this the LCD display should be present in service mode. Even if LCD does not display, other operations will be performed.
2. When **■** key is pressed during each operation, it will return to the state in step 1.
3. When **▶▶** or **◀◀** key is pressed, the FOP moves to the inside or outside circumference. Tracking servo and sled servo go off when this is done, so press **MODE** to turn on the tracking servo if necessary.
4. When **REMAIN** is pressed, the display stops. When **REMAIN** is released, the display continues to change. This allows check of each segment.
5. When **▶■** key is pressed, focus search starts, then **CLV-S** (run-up mode) starts. When there is no disc, focus search is repeated again and again.
6. When **MODE** is pressed, tracking servo, sled servo and **CLV-A** (servo during **PLAY**) go **ON**.
7. When steps 5 and 6 are performed, the disc begins to play. At this time, the top panel should be closed and **S901** and **S902** are to be **ON**. When the laser is not emitted, focus search is repeated. When **S901** is on and **S902** is off, **CLV-S** does not work properly and the disc rotates at high speed.

Step 3 (Service Mode release)

1. First be sure to turn POWER switch off, then remove the BATT2 point solder jumper. During service mode, C803 is discharged by turning POWER switch off. Therefore, micro-computer IC801 is reset by next turning POWER switch on.
2. The set will now operate normally.

MAIN BOARD (double-sided) CHECK

1. The main board is double-sided, so there are parts mounted on both sides. However, checking can be done from the chip component mounted side. Refer to the mounting diagram on Pages 72-76.
2. D/A converter IC's are mounted underneath the DC-DC converter unit, and these can be checked from the chip component mounted side.
IC's under the DC-DC converter unit:
IC301: D/A converter
IC101, 201: integrator, sample hold
IC302: switcher
3. When operating the set with the LCD module-flexible board removed, the pattern corresponding to each key switch is to be grounded momentarily.

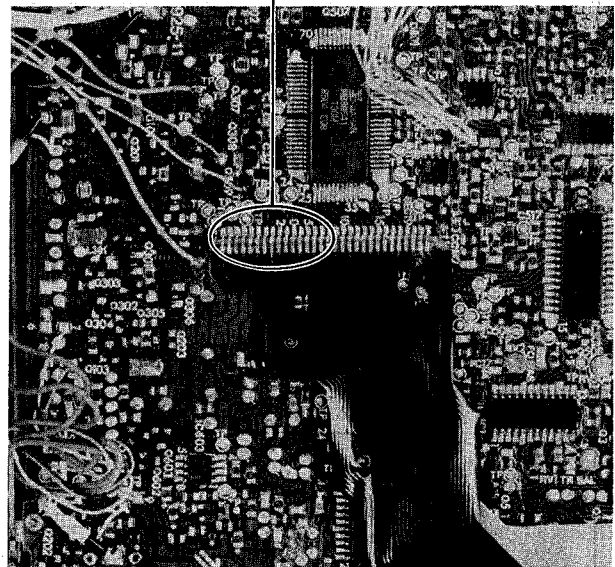
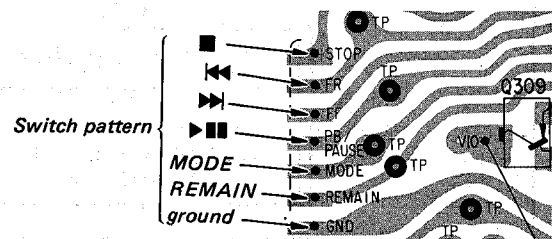


Fig. 4 Switch Pattern Diagram

Laser Diode Check Procedure

The laser diode in this set will not emit unless the top panel is closed and S901 (terminal sorting type), S902 (leaf SW type) are turned on.

Focus search can be operated in service mode even if S902 is OFF, so that the laser diode will emit if S901 (terminal sorting type) are turned on in this mode.

The laser diode is checked using the current value which flows to the laser diode inside the FOP.

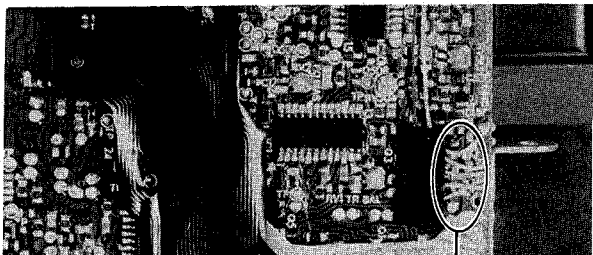
Procedure 1 (service mode or normal operation).

1. Close the top panel.
2. Connect an ammeter as shown in Figure 5.
3. Press the **▶■** key.
4. Confirm that the ammeter reading is within the range given below.

10–100 mA

If not, APC circuit or FOP is defective.

If normal operation is used, the laser diode goes on for about 3 seconds due to focus search.



Remove the brown FS1 lead and connect the ammeter as shown.

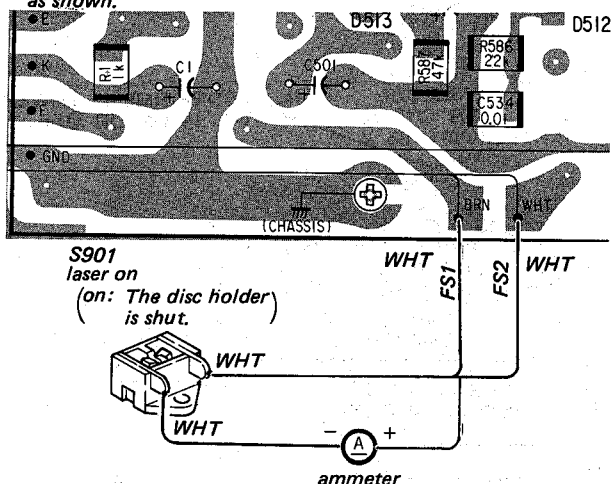
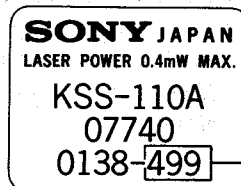


Fig. 5 Ammeter Connection

Procedure 2 (service mode or normal operation).

1. Close the top panel.
2. Remove the main board and read the current value on the label affixed to the FOP.
(Label on FOP)



current value
This means 49.9 mA.

The current value varies with the set.

3. Mount the main board and connect an ammeter as shown in Figure 5.
4. Press the **▶■** key.

5. Confirm that the ammeter reading is within the range given below.

value on label ± 11 mA (25°C)

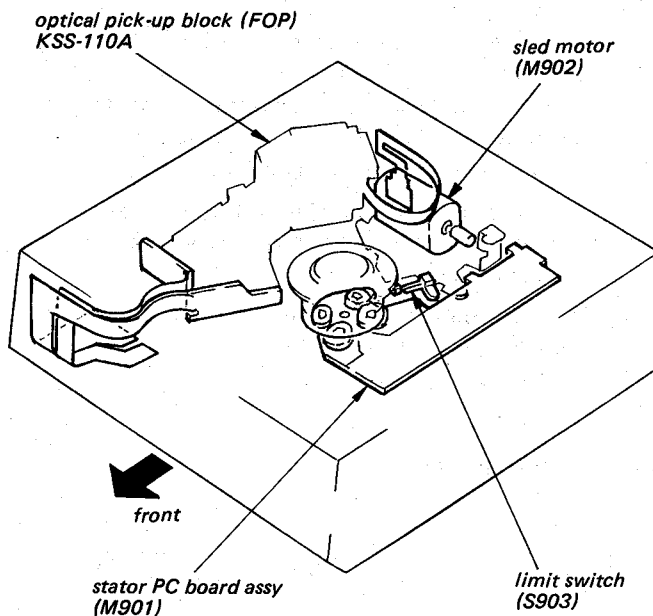
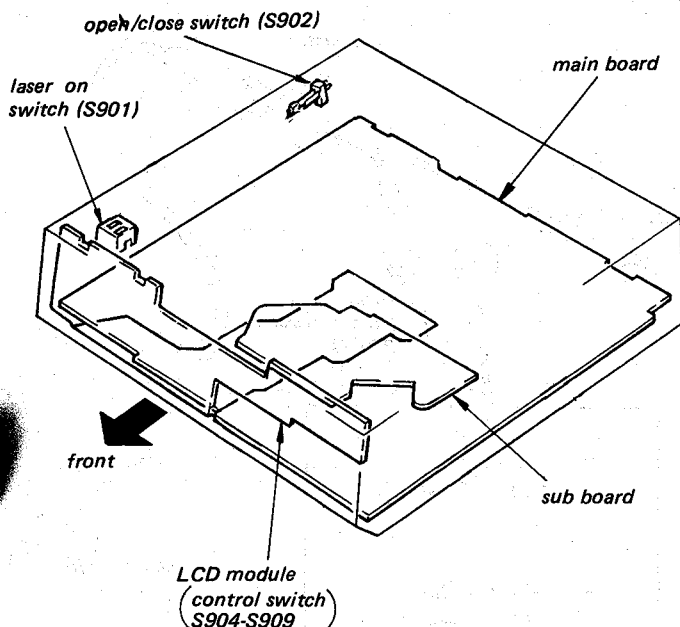
variation relative to temperature:

0.4 mA/°C

(Current increases when temperature rises and decreases when it drops.)

If the value is more than the range given, APC circuit has been defective or the laser diode is deteriorated. If it is less, APC circuit or FOP is defective.

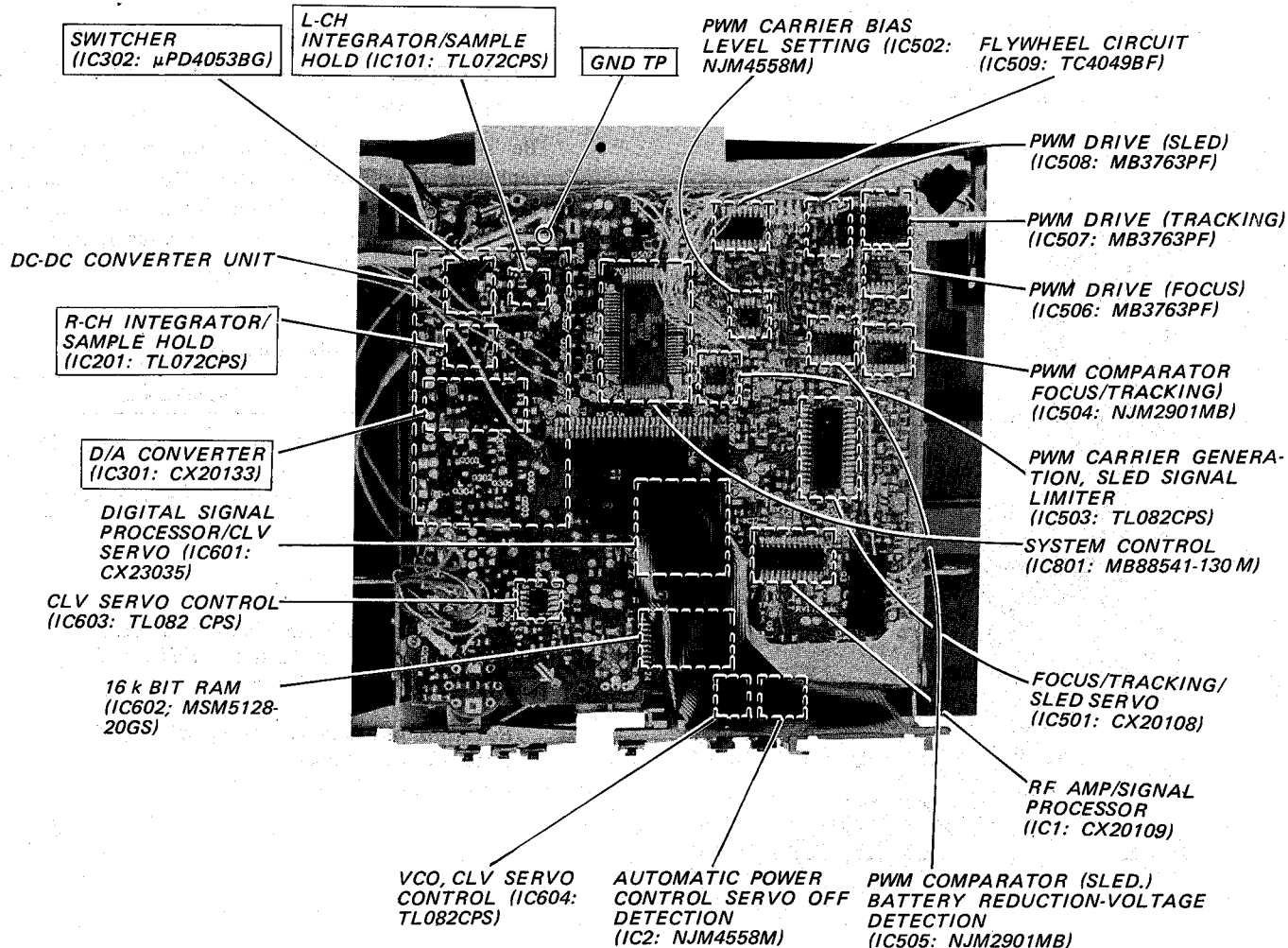
PC BOARDS/SWITCH/MOTOR LAYOUTS



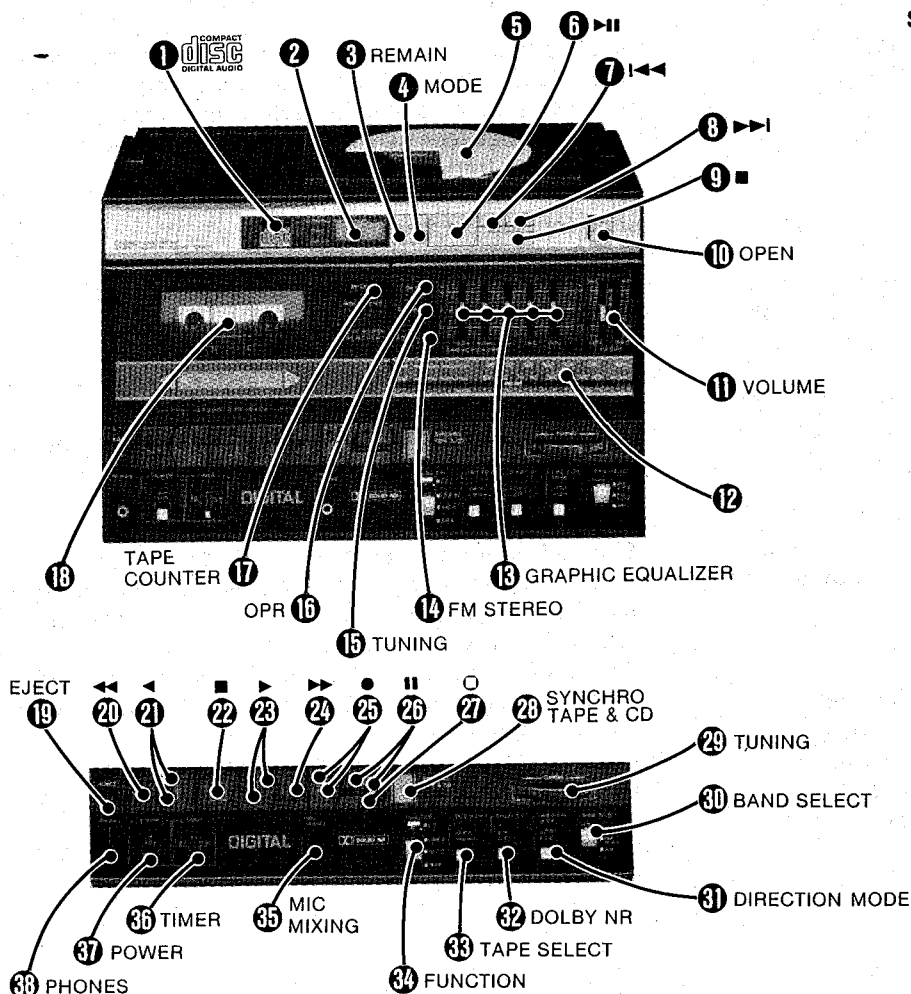
MAIN BOARD IC LAYOUTS

(Viewed from chip component mounted side)

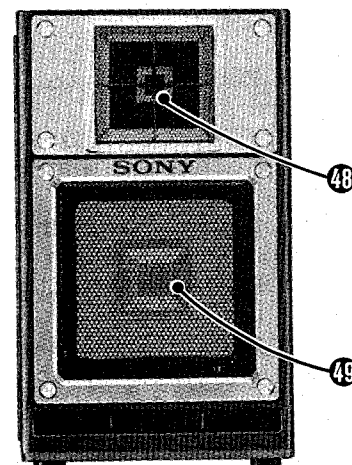
Parts in are mounted under DC-DC CONVERTER UNIT.



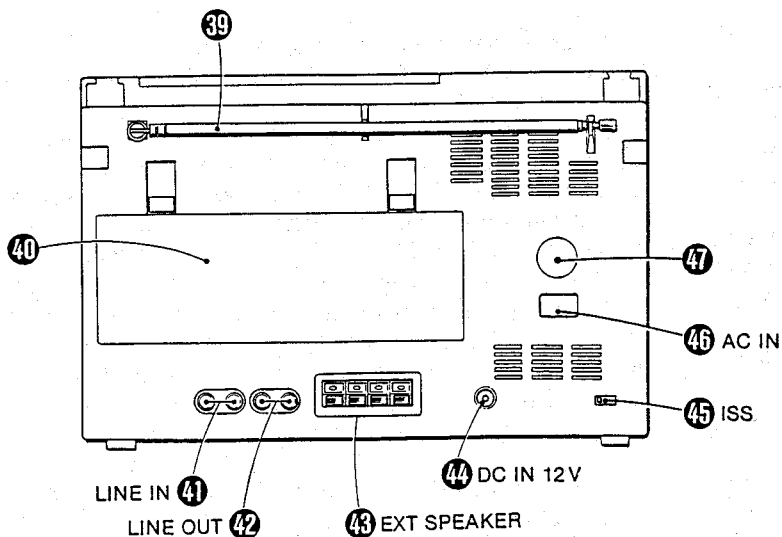
1-9. FUNCTIONS OF CONTROLS AND SWITCHES



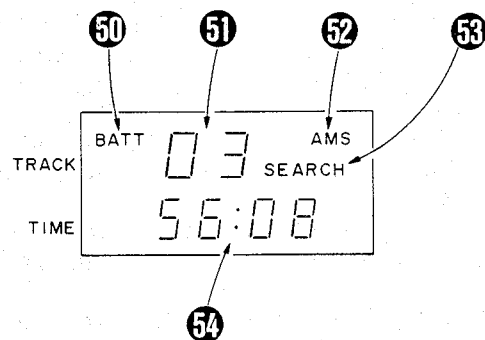
Speaker



Rear



Display window 2



FUNCTION OF CONTROLS

The numbers in the photos **A** on page 3 are keyed to the following explanations.

Front

① indicator

Lights up when the FUNCTION switch is set to CD.

② Display window

See ⑤-⑥ on page 19 and the illustration on page 17.

③ REMAIN key

While this key is being pressed, the TRACK indicator will show the remaining number of selections on the disc and the TIME counter will show the time remaining before the end of the last selection.

When you stop pressing the key, the display will return to the normal indications. (See page 21.)

④ MODE key

Press to select either AMS function or SEARCH function. When play starts, the AMS indicator will appear on the display window, indicating that the AMS function can be activated by pressing the ◀◀ or ▶▶ key. To select the SEARCH function, press this key. The SEARCH indicator will appear. Press the key again to return to the AMS function.

⑤ Disc compartment

Place a compact disc here. To open the lid, press the OPEN button.

⑥ ▶|| (play/pause) key

Press this key once to start disc playing. The indications on the display window will appear.

Press again to stop the play for a moment. The TIME counter will flicker. To release the pause mode, press this key again. The TIME counter will return to the normal time indication and disc playing restarts.

⑦ ◀◀ (AMS/search) key

While the AMS indicator is being displayed, press to go back to the beginning of the desired selection. While the SEARCH indicator is being displayed, keep the key pressed to go back to the desired point in a particular selection. During pause mode, you can go back faster than during playback.

⑧ ▶▶ (AMS/search) key

While the AMS indicator is being displayed, press to advance to the beginning of the desired selection. While the SEARCH indicator is being displayed, keep the key pressed to advance to the desired point in a particular selection. During pause mode, you can advance faster than during playback.

⑨ ■ (stop) key

Press to stop the disc playing. The indications on the display window will disappear after a few seconds and disc will stop rotating.

⑩ OPEN button

Press to open the disc compartment lid.

⑪ VOLUME controls

These control the overall output level.

⑫ Frequency scale and dial pointer

⑬ GRAPHIC EQUALIZER controls

Slide downwards or upwards to equalize the reproduced sound.

When the equalizer is not used, set the controls to 0 (center position).

Frequency coverage of each equalizer control

100 Hz: Use this control to boost or cut the bass.

400 Hz: Use this control to adjust the middle frequency range such as the human voice and the middle frequencies of instrumental music.

1 kHz: Use this control to provide more presence of vocals.

4 kHz: Use this control to adjust the brightness of sound.

10 kHz: This control effects general treble. Slide downward to reduce high frequency noise, such as tape hiss.

⑭ FM STEREO indicator

This indicator will light when an FM stereo program of sufficient signal strength is tuned in.

⑮ TUNING indicator

Lights up when a signal is tuned in accurately.

⑯ OPR (operation) indicator

This indicator lights up while the unit is in operation.

⑰ TAPE COUNTER and reset button

⑱ Cassette holder

⑲ EJECT lever

Press this lever to open the cassette holder.

⑳ ◀◀ (fast-reverse, rewind) key

㉑ ◀ REV (reverse) key and indicator

㉒ ■ (stop) key

㉓ ▶ FWD (forward key and indicator

㉔ ▶▶ (fast-forward) key

㉕ ● (record) key and indicator

㉖ || (pause) key and indicator

㉗ ○ REC MUTE (record muting) key

28 SYNCHRO TAPE & CD key

Press this key to start the recording from the builtin CD player.

29 TUNING knob**29 BAND SELECT switch**

FM ST: Normally set to this position for FM reception.

FM MONO: Set to this position when it is hear to hear the FM broadcast due to noise.

AM: For AM reception.

31 DIRECTION MODE switch

Depress the switch (⏮ ⏭) to record on both sides of a cassette or to repeat playback of both sides of a cassette. The recording will stop at the end of the reverse side. So if the switch is depressed when the reverse side of the cassette is being recorded, the tape will stop at the end of that side.

Press to release it (⏮ ⏭) to record or play back the front side or the reverse side of a cassette once only.

32 DOLBY NR switch

To record with the Dolby NR* (Noise Reduction) process, depress the switch (⏮ ON). To record without the Dolby NR process, press it again (⏮ OFF).

When playing back, set this switch to the same position used in recording.

*"Dolby" and the double-D symbol are trade marks of the Dolby Laboratories Licensing Corporation. Noise reduction system manufactured under license from Dolby Laboratories Licensing Corporation.

33 TAPE SELECT switch

Select the type of tape to be used.

Depress the switch (⏮ METAL) for a TYPE IV (metal) tape or TYPE II (CrO₂) tape.

Press to release it (⏮ NORMAL) for a TYPE I (normal) tape.

34 FUNCTION selector

CD: To listen to or record the CD sound.

LINE IN: To listen to or record the sound of the equipment connected to the LINE IN jacks.

RADIO: To listen to or record radio programs.

TAPE: To play back the tape.

35 MIC MIXING (microphone mixing) jack (minijack)

For connecting a microphone for mixing. See "Microphone mixing" on page 23.

36 TIMER switch

You can set the unit to record or playback mode at a predetermined time by connecting any commercially available timer. See "Examples of timer use" on page 24.

37 POWER switch**38 PHONES (headphones) jack (stereo minijack)**

Accepts any headphones with a stereo miniplug. When the headphones are plugged in, the speakers are automatically disconnected.

Rear panel**39 Telescopic antenna**

Used for FM reception.

40 Battery compartment**41 LINE IN (line input) jacks (phono jacks)**

For connecting an additional cassette deck to dub a tape or for connecting an amplifier to record the sound through the amplifier onto this set.

42 LINE OUT (line output) jacks (phono jacks)

For connecting an additional cassette deck to dub a tape from this set or to record the mixed sound of the microphone and the built-in cassette deck.

43 EXT SPEAKER (external speaker) terminals

Connect the speaker system using the supplied speaker cords.

44 DC IN (external power input) 12V jack

For connecting an optional Sony car battery cord DCC-16AE.

45 ISS (interference suppress switch)

While recording AM programs, if a beat (whistling noise) is heard, which does not occur before pressing the ● button, set the ISS at the rear to 1, 2 or 3, depending on which best reduces the noise.

46 AC IN (power input) jack

For connecting the supplied ac power cord.

47 Voltage selector (for the model except for United Kingdom and European countries)

As required, set the selector to either 110, 120, 220 or 240V.

Speaker**48 Tweeter****49 Woofer****Display window 2****50 BATT (battery) indicator**

This indicator appears when disc playing starts. During battery operation, this indicator shows the battery condition. When the batteries are weak, the indicator flickers.

51 TRACK indicator

This indicator shows the track number of the selection being played.

While the REMAIN key is being pressed, the indicator shows the remaining number of selections on the disc.

52 AMS indicator

This indicator appears when disc playing starts. While this indicator is being displayed, you can locate the beginning of the desired selection by pressing either the ◀◀ or ▶▶ key.

53 SEARCH indicator

This indicator appears when the MODE key is pressed once during the playback or the pause mode. While this indicator is being displayed, if you press either ◀◀ or ▶▶ key, you can go back or advance to the desired point on the disc.

54 TIME counter

The counter shows the location in a particular selection by means of actual elapsed time. The first two digits of the counter show playing time of the selection in minutes, and the last two digits show the seconds.

While the REMAIN key is being pressed, the counter shows the time remaining before the end of the last selection on the disc. During pause, the time indication flickers.

MICROPHONE MIXING

- No recording level adjustment is necessary with the automatic recording system.
- The recording level is not affected by the VOLUME or GRAPHIC EQUALIZER controls.
- The use of TYPE I (normal) and TYPE IV (metal) tapes is recommended for recording.

Note

When recording on both sides of the cassette, be sure to start recording from the front side. If the recording is started from the reverse side, the tape stops at the end of the reverse side even if the DIRECTION MODE switch is depressed (⏮).

All-mode shut-off mechanism

When a tape is entirely wound in any operating mode (except for playback with the DIRECTION MODE switch set to ⏮), the engaged mode will be shut off automatically and the indicators will go off.

Quick reverse

When the DIRECTION MODE switch is depressed (⏮), as soon as the playback or recording of the front side of the cassette is finished, the playback or recording of the other side will begin.

RECORD MUTING OPERATION

While recording, you can eliminate unwanted program material such as commercials by using the ⏻ (record muting) key.

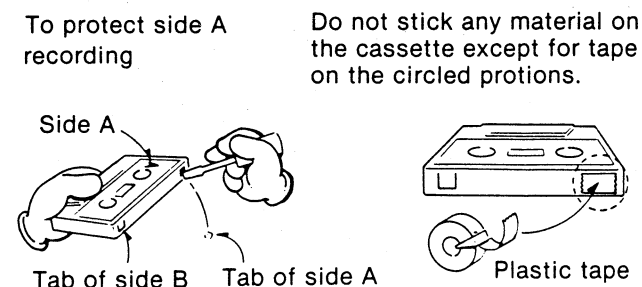
While this key is pressed, no signals are recorded on the tape, but you can monitor the program through the speakers or headphones.

- 1 While recording, just before the portion to be eliminated, press the ⏻ key. Hold it pressed for about four or five seconds.
- 2 Press the ⏮ key and release the ⏻ key.
- 3 When you want to start recording again, press the ⏮ key to release. Now the recording will begin again.

NOTES ON CASSETTES

To prevent accidental erasure

Remove the tab as illustrated so that the record mode does not function when the record key is pressed. To record on a cassette once tabs have been removed, simply cover the slot with plastic tape.



- 1 Set the VOLUME controls to MIN.
- 2 Connect the microphone equipped with a miniplug to the MIC MIXING jack.
- 3 Depress the POWER switch (⏻ ON).
- 4 Select the sound source which you want to mix with the microphone with the FUNCTION selector.
For the CD sound, set it to CD.
For the program source connected to the LINE IN jacks, set it to LINE IN.
For a radio program, set it to RADIO.
For a taped sound, set it to TAPE.
- 5 Play the program source to be mixed.
- 6 Adjust the volume and tone with the VOLUME and GRAPHIC EQUALIZER controls.

When mixing with the built-in CD player, the microphone sound cannot be heard through the equipment connected to the LINE OUT jack.

Recording the mixed sound

To record the mixed sound of the microphone and the tuner or CD player etc., set the CFD-5 in record mode. To record the mixed sound of the microphone and the built-in cassette deck, connect an additional cassette deck to the LINE OUT jacks and set the CFD-5 in playback mode. Set the other equipment in the record mode.

Note

A howling sound may occur when the microphone is too near the speakers. If this happens, move the microphone away from the speakers or turn down the VOLUME controls.

LISTENING TO/RECORDING FROM VARIOUS SOUND SOURCES

Notes on connection

For connection, see the illustrations [E] — [H] on page 5.

- Before connecting, be sure to turn the power off.
- Be sure to insert the plugs firmly into the jacks. Loose connections may cause hum and noise.
- Use the optional Sony RK-74A connecting cord.

Dubbing from another stereo tape recorder (illus. [E])

- 1 Depress the POWER switch (⏻ ON).
- 2 Set the FUNCTION selector to LINE IN.
- 3 Set the TAPE SELECT switch and DOLBY NR switch appropriately.
- 4 Set CFD-5 in record mode.
- 5 Set the other recorder in playback mode.

Recording the CD sound onto another stereo tape recorder (illus. [G])

- 1 Depress the POWER switch (⏻ ON).
- 2 Set the FUNCTION switch to CD.
- 3 Set the other tape recorder in record mode and play a disc.

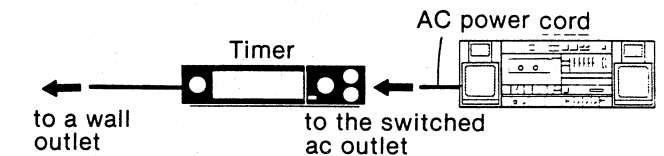
Listening to the CD sound through an amplifier (illus. [H])

- 1 Depress the POWER switch (⏻ ON).
- 2 Set the FUNCTION switch to CD.
- 3 Start the disc playing.

Caution

Do not connect the LINE OUT jacks to the PHONO inputs of the amplifier.

EXAMPLES OF TIMER USE



Example (a) Timer activated recording

- 1 Set the TIMER switch to OFF.
- 2 Set the power switches of the CFD-5 and the timer to ON.
- 3 Set the FUNCTION selector to RADIO and tune in the station which will broadcast the program you want to record.
- 4 Insert a cassette with the side to be recorded on toward you, and set the TAPE SELECT and DOLBY NR switches appropriately.
- 5 Set the DIRECTION MODE switch as desired. To play back the front side only, set it to ⏮. To repeat playback of both sides, set it to ⏮.
- 6 Set the timer to the desired time. (At this point, power to the set will be cut off.)
- 7 Set the TIMER switch of the CFD-5 to REC.

Note on timer-activated recording on both sides

Timer-activated recording or playback always begins from the front side when the power is turned on. Therefore, if power is interrupted during reverse side recording, or if a program timer which can turn multiple programs on and off in sequence is used and the recording by the previous timer setting has finished on the reverse side, the next recording will start from the front side and the recorded material on the front side will be erased.

Example (b) To wake up to the CD sound, a taped program or a radio program

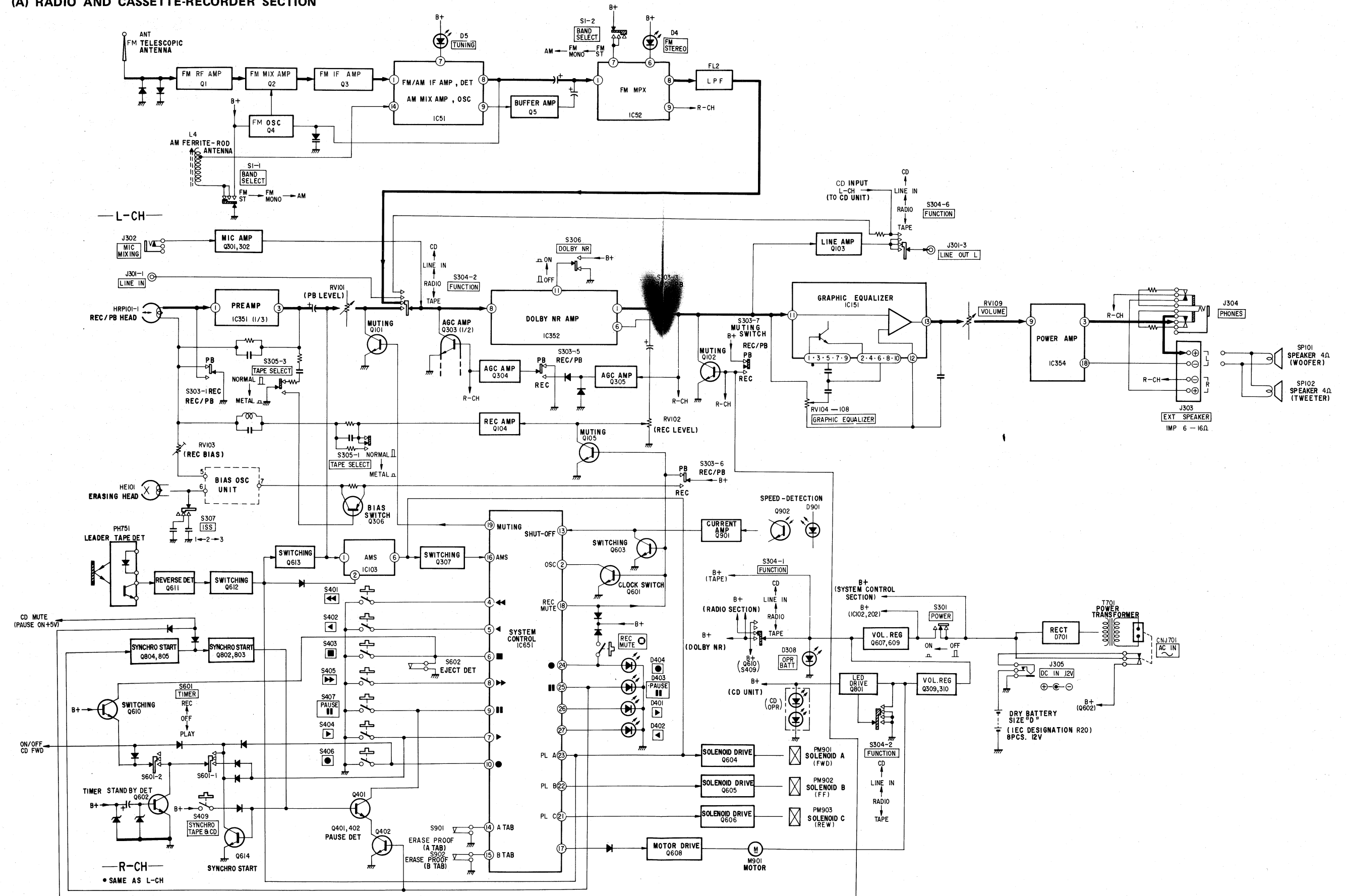
- 1 Set the TIMER switch to OFF.
- 2 Set the power switches of the CFD-5 and the timer to ON.
- 3 Select the sound source to which you want to wake up using the FUNCTION selector and play the program source.
- 4 Adjust the volume with the VOLUME controls.
- 5 Set the timer to the desired time. (At this point, power to the set will be cut off.)
- 6 To wake up to the CD sound or taped program, set the TIMER switch of the CFD-5 to PLAY. To wake up to a radio program, set it to OFF.

Notes on timer setting

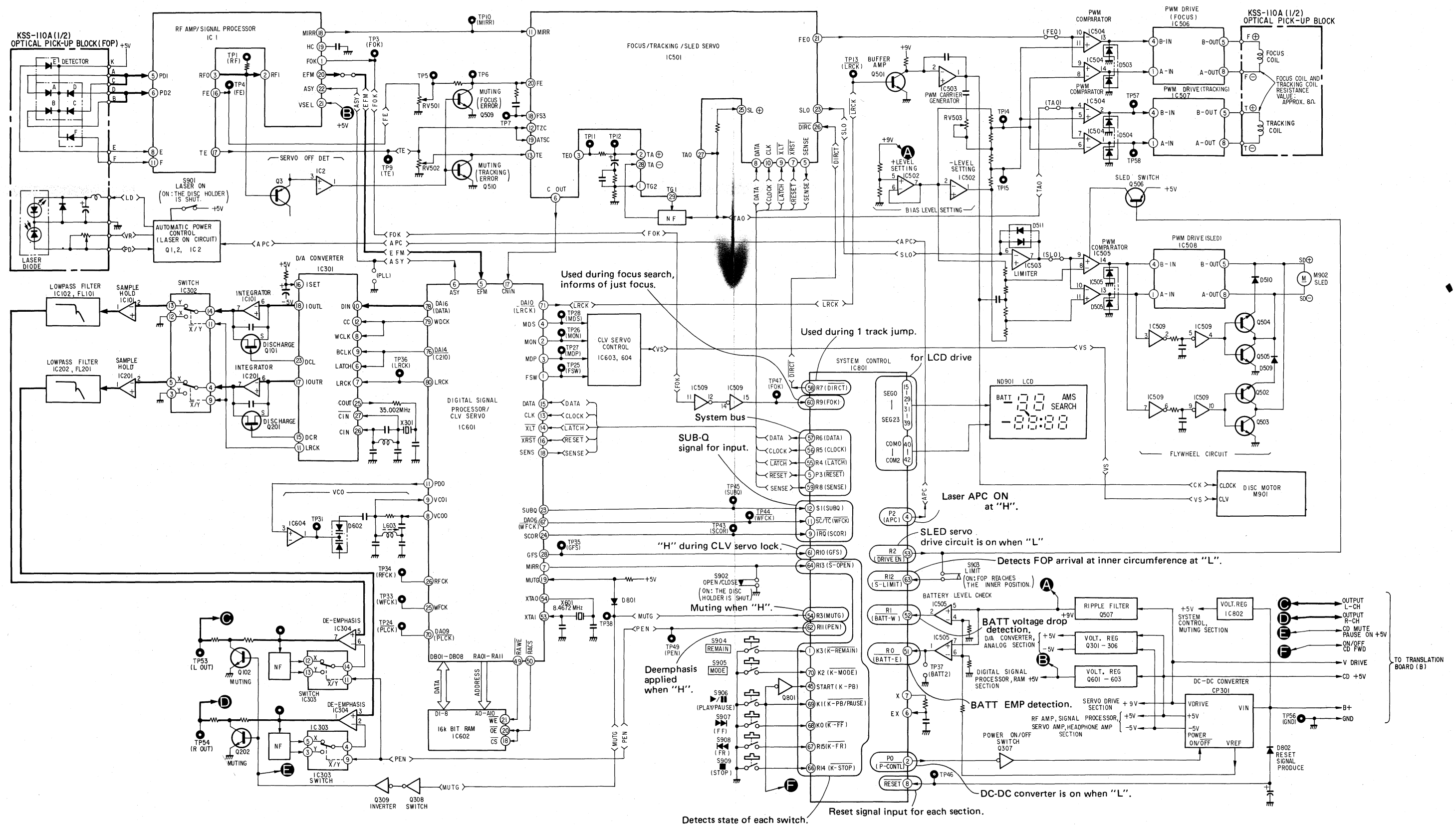
- Set the TIMER switch to OFF when not using the timer. If the power is on when this switch is set to the REC or PLAY position, recording or playback will start automatically.
- The TIMER switch of this set will function properly only if the set is turned on **after** the switch is set to REC or PLAY. Make sure that the power is turned off after setting the timer.

1-10. BLOCK DIAGRAMS

(A) RADIO AND CASSETTE-RECORDER SECTION



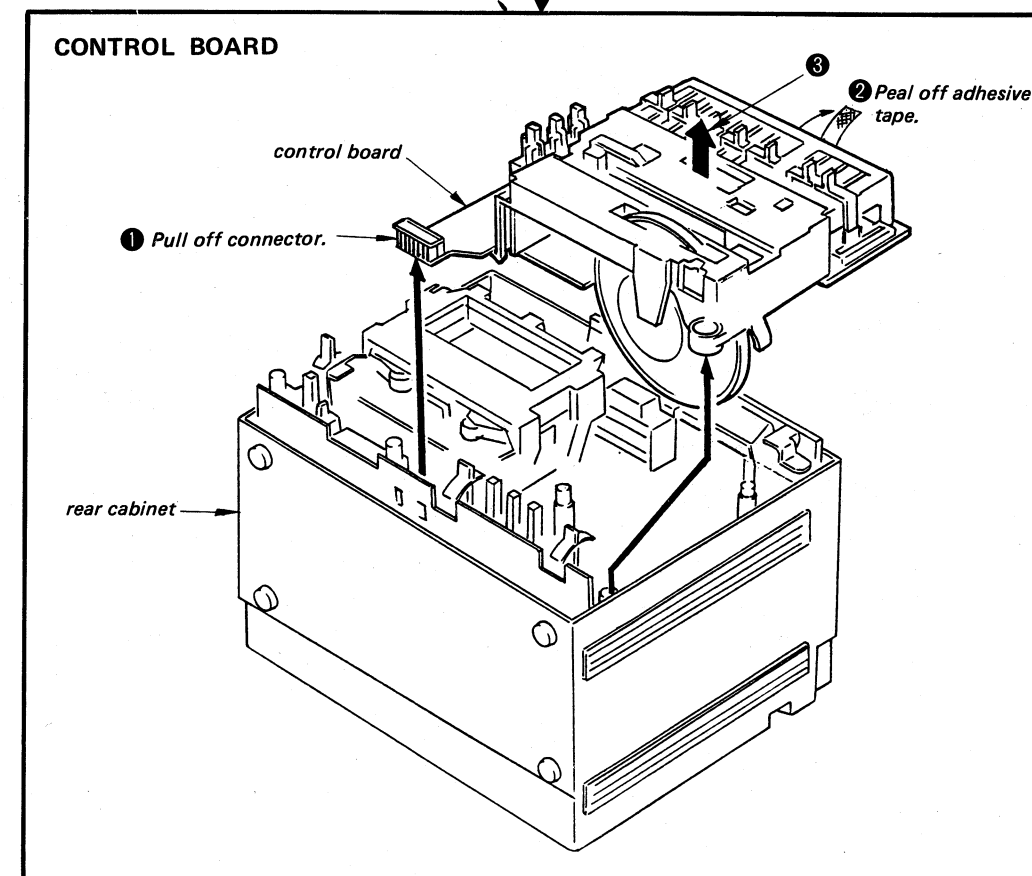
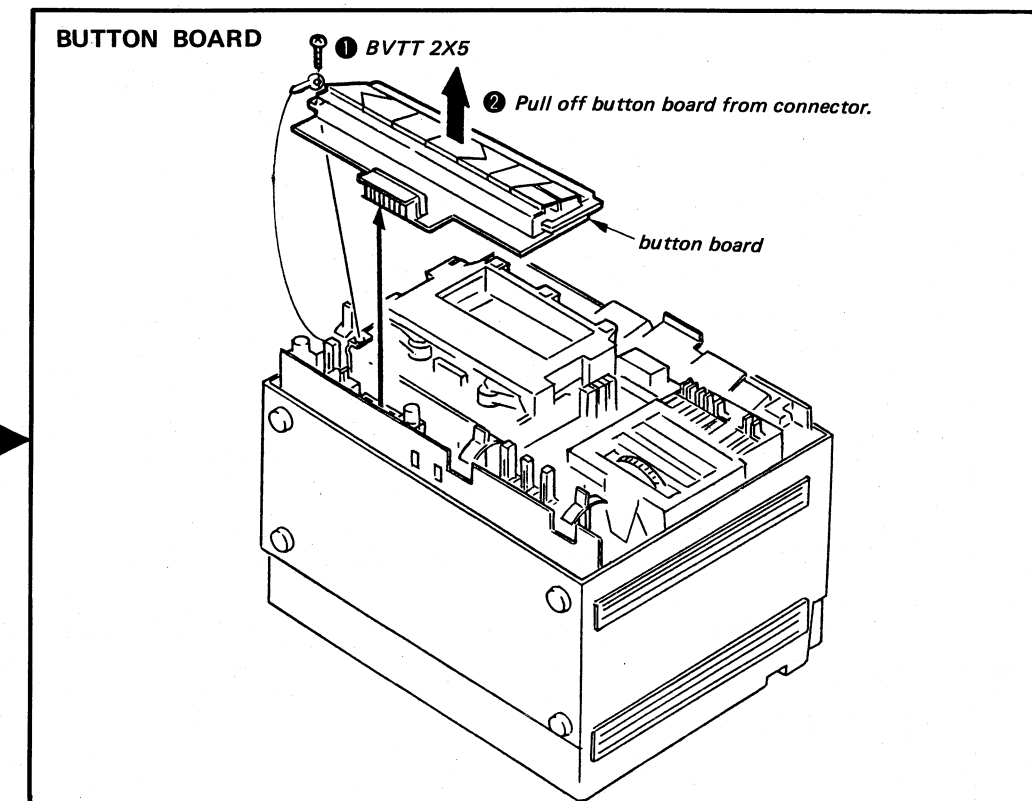
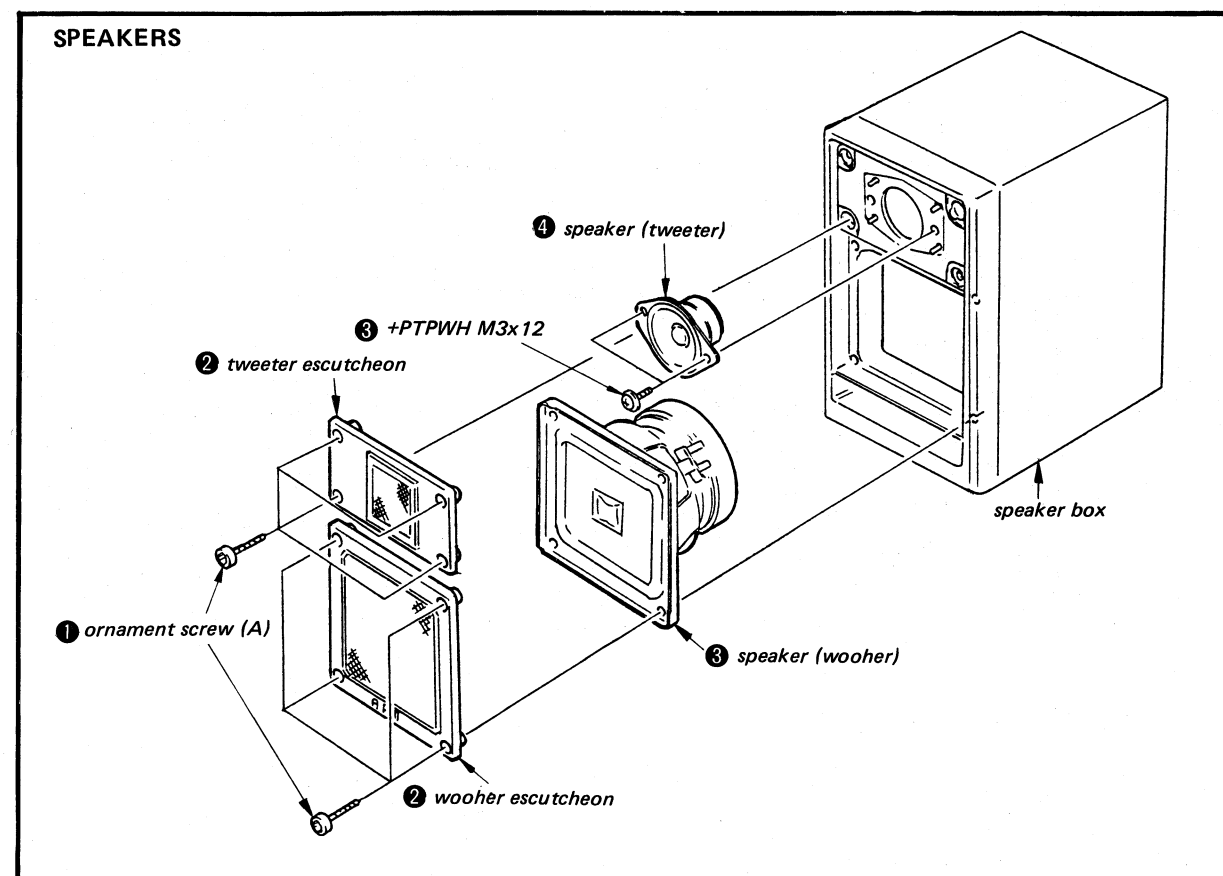
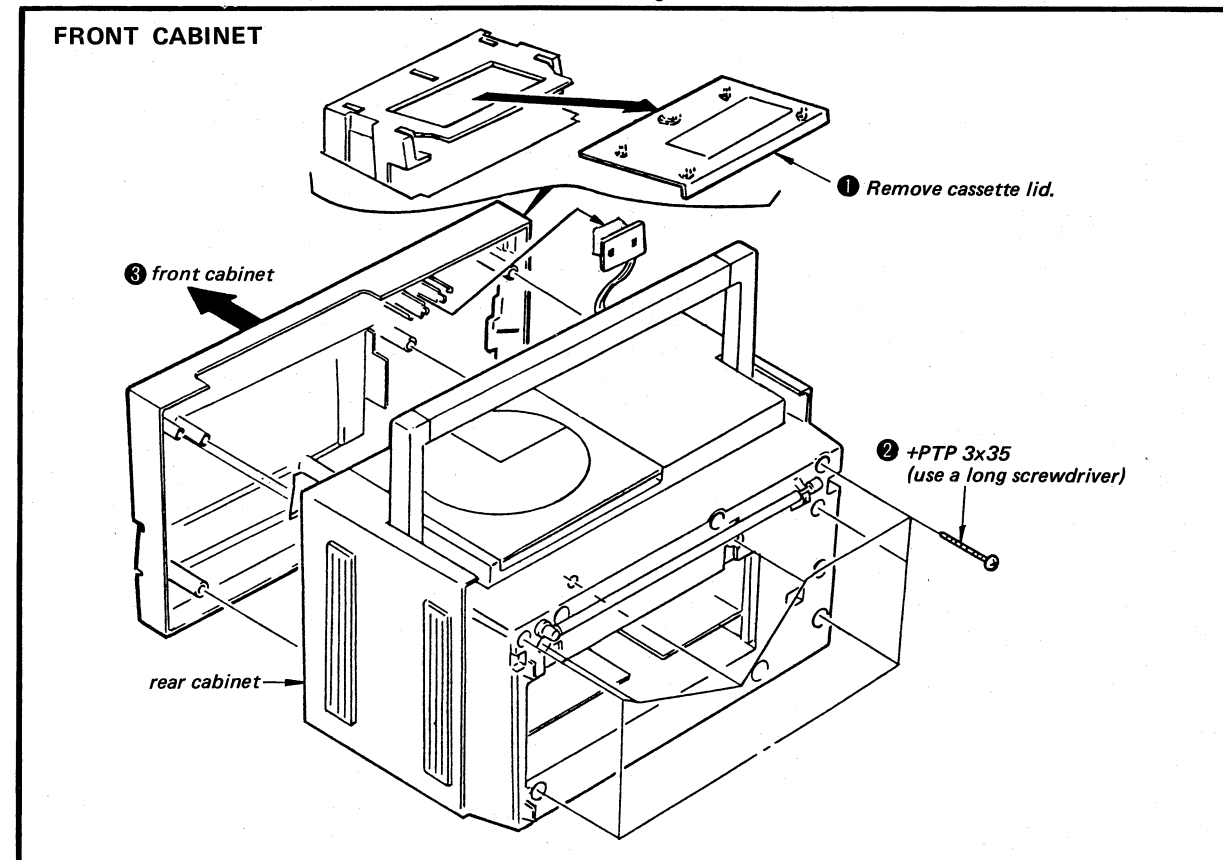
(B) CD PLAYER SECTION



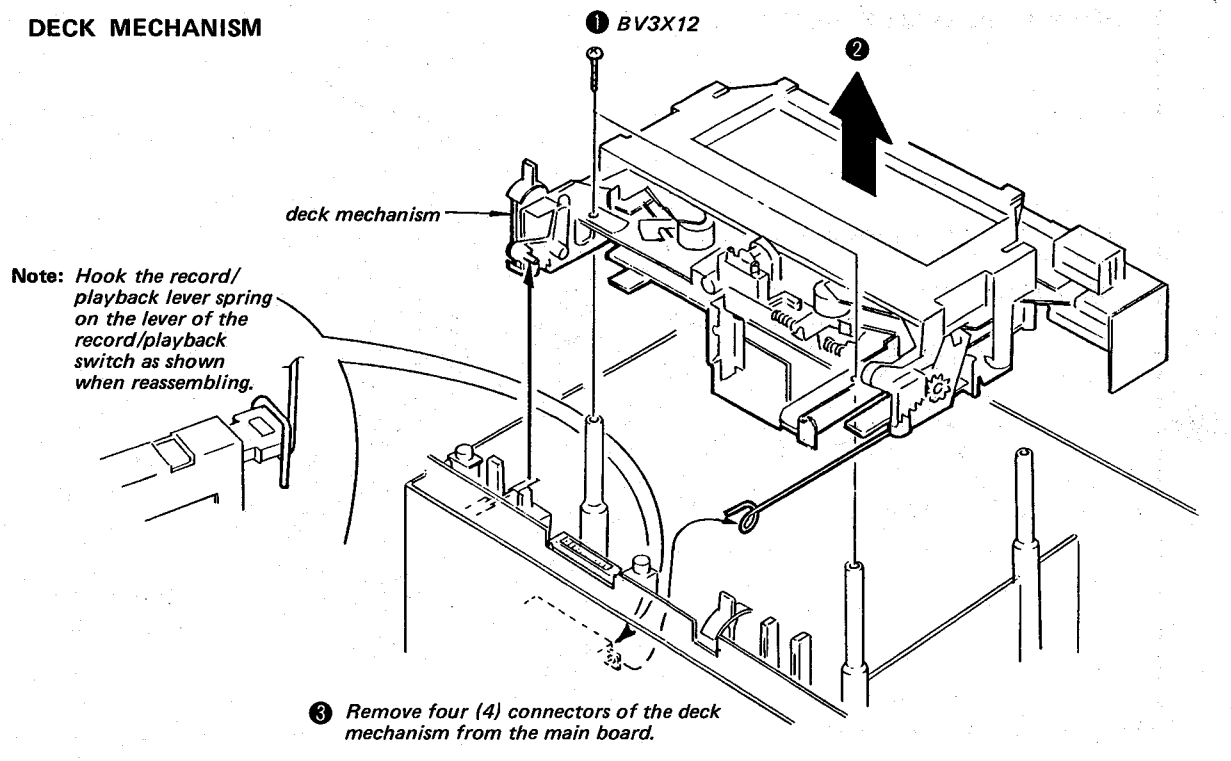
SECTION 2 DISASSEMBLY

2-1. DISASSEMBLY

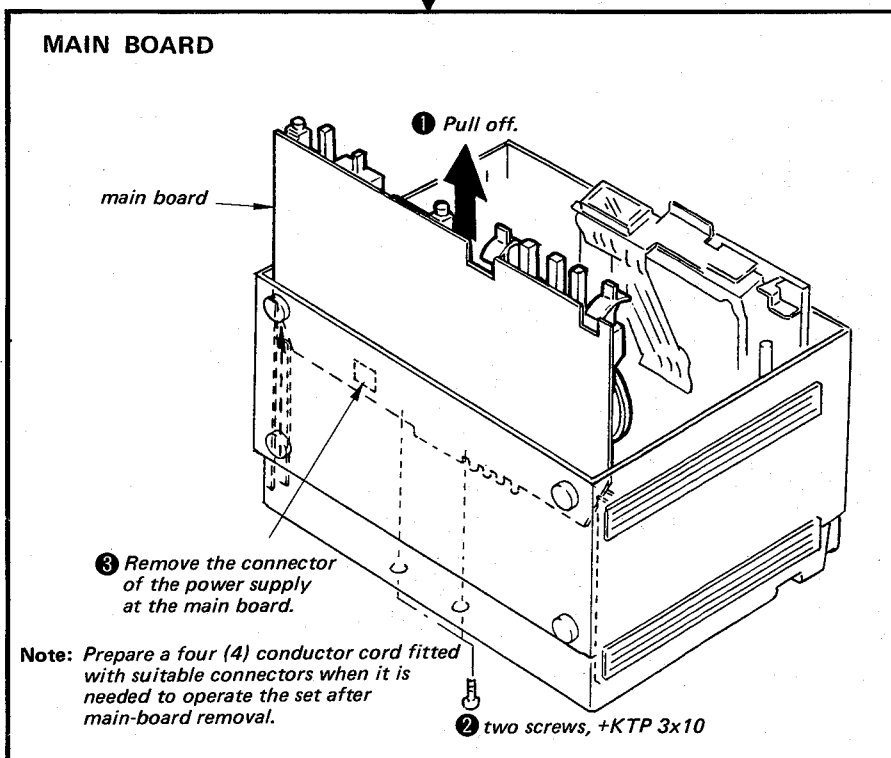
• Note: Follow the disassembly procedure in the numerical order given.



DECK MECHANISM



MAIN BOARD



RECORD / PLAYBACK HEAD

Note: When removing panel screws, perform as follows.

2 Turn head.

1 Push fan gear.

1 panel screws (2)
record/playback head

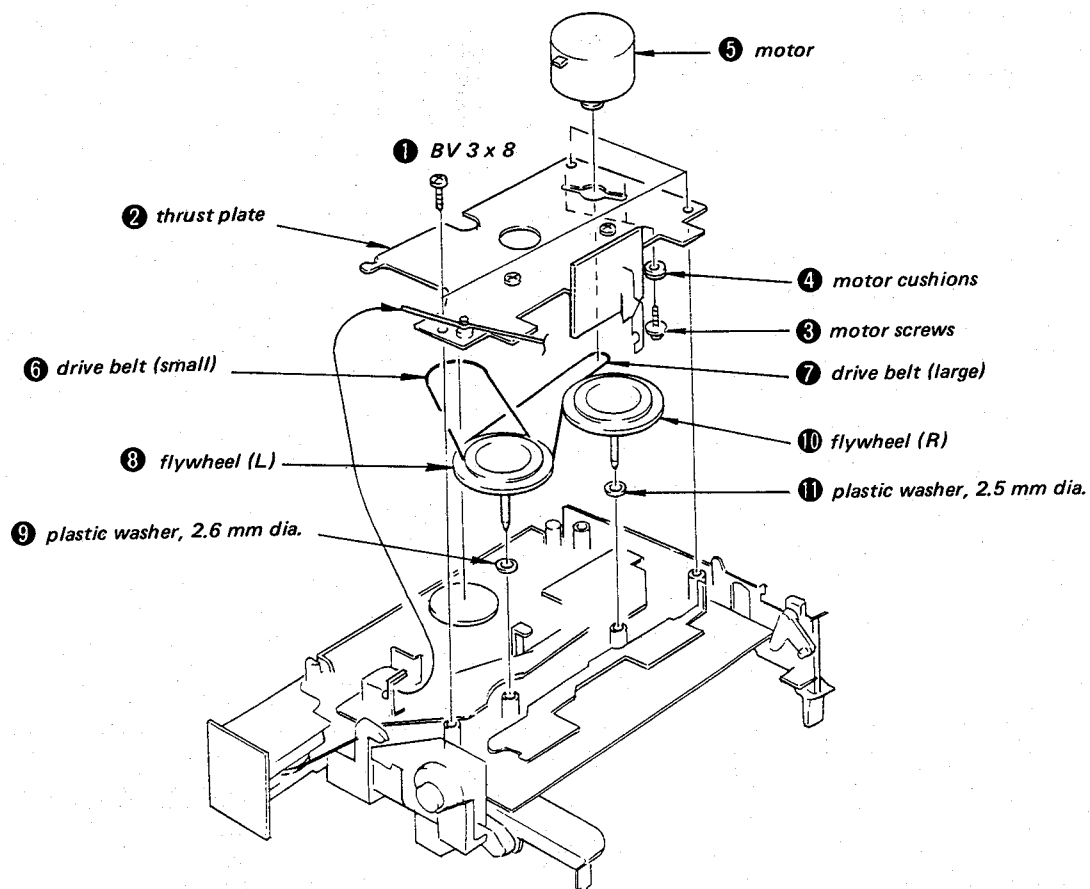
POWER SUPPLY BOARD and POWER TRANSFORMER

+BVTP 4X10

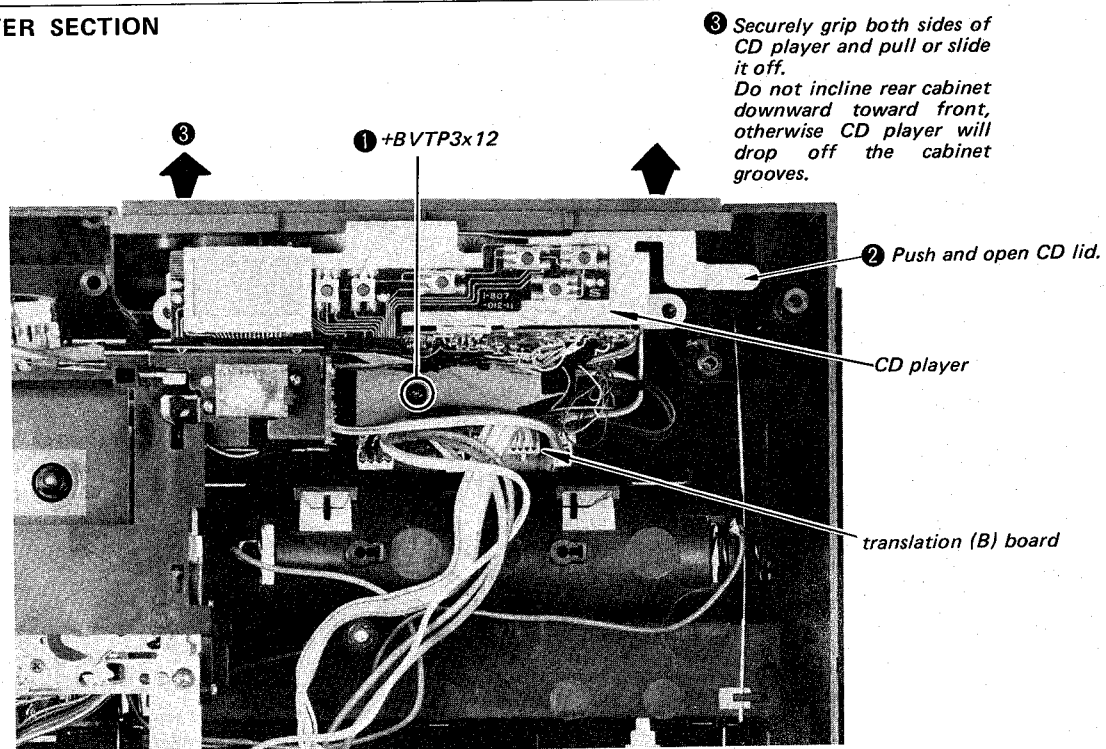
power-supply board

power transformer

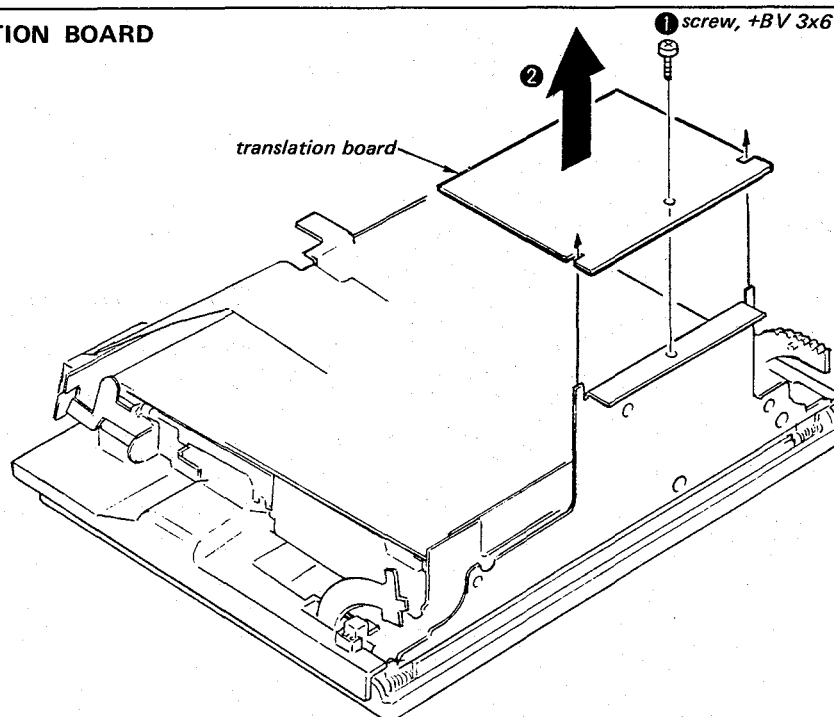
THRUST PLATE, MOTOR and FLYWHEEL



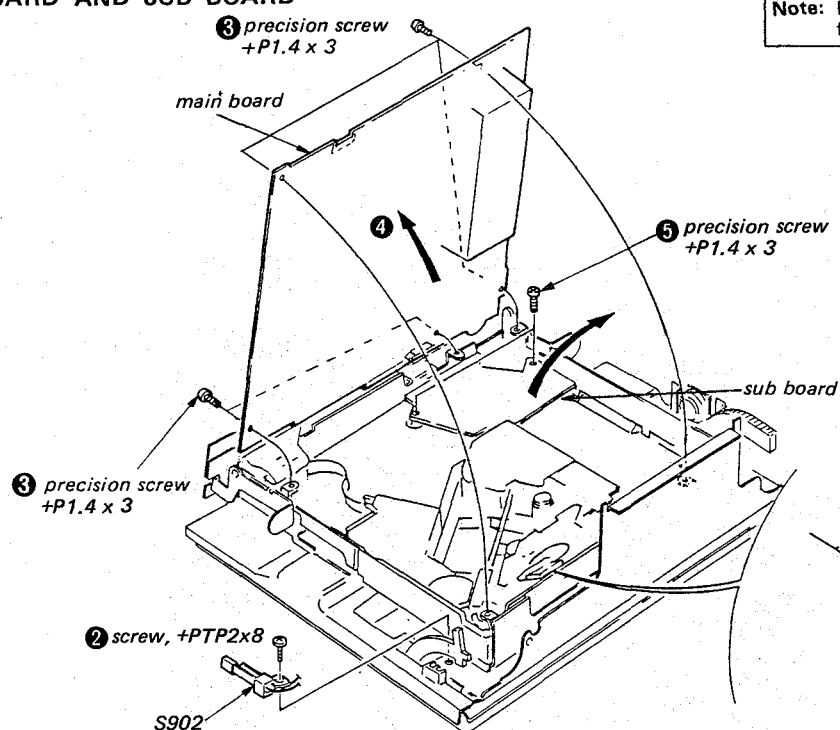
CD PLAYER SECTION



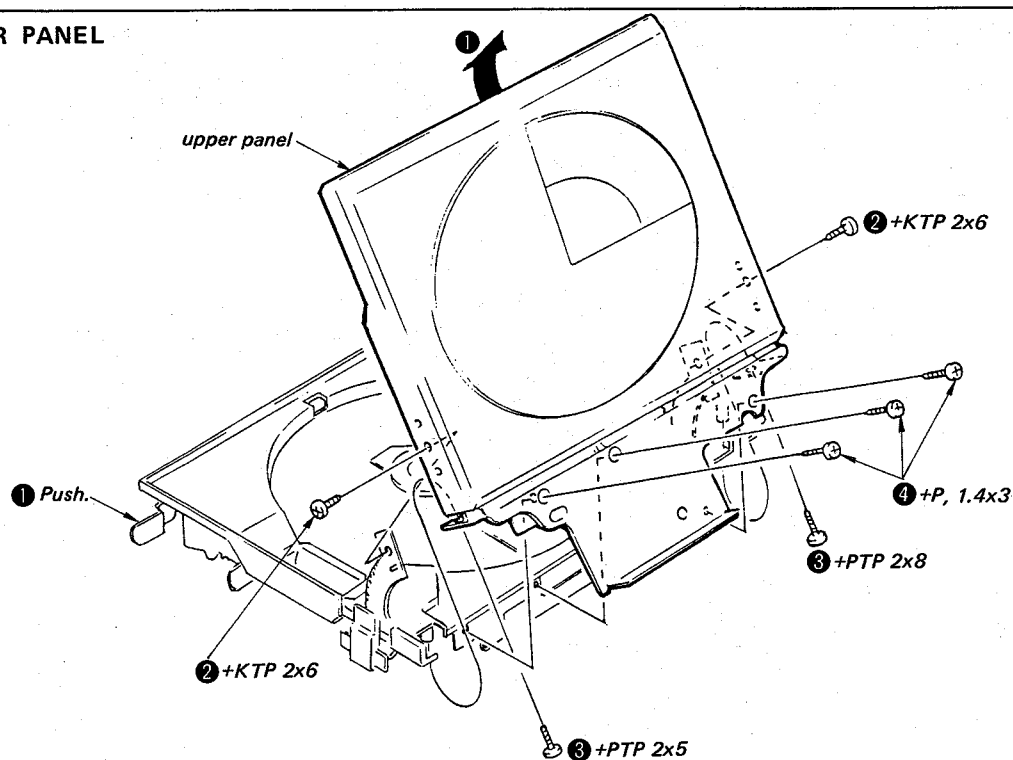
TRANSLATION BOARD



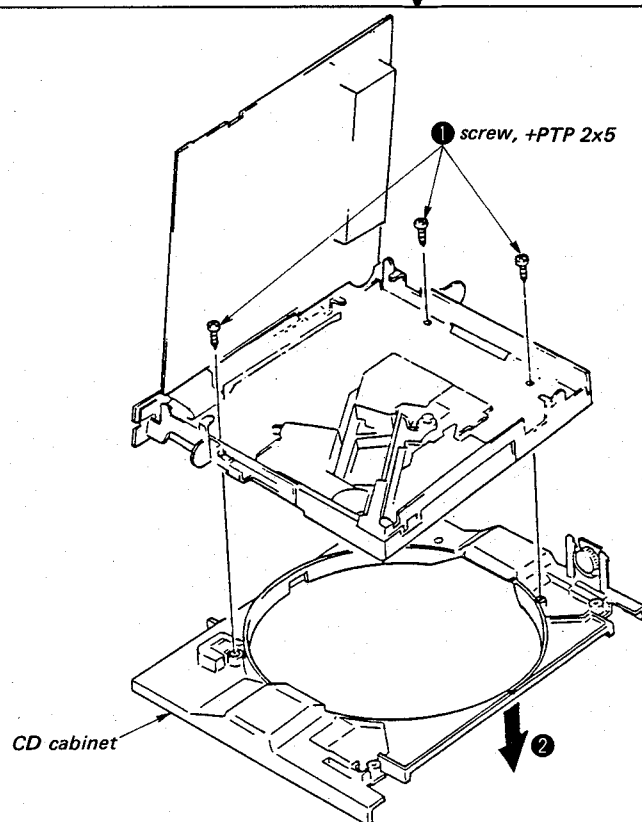
MAIN BOARD AND SUB BOARD

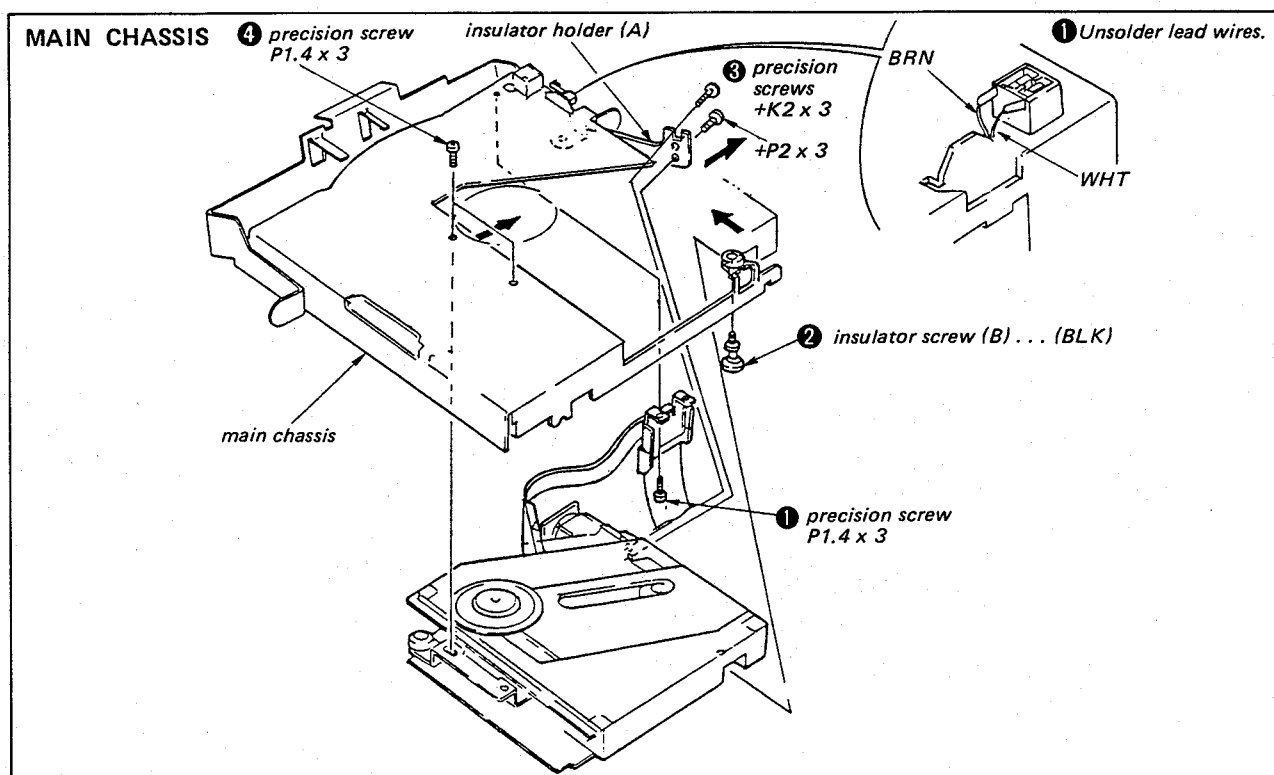


UPPER PANEL

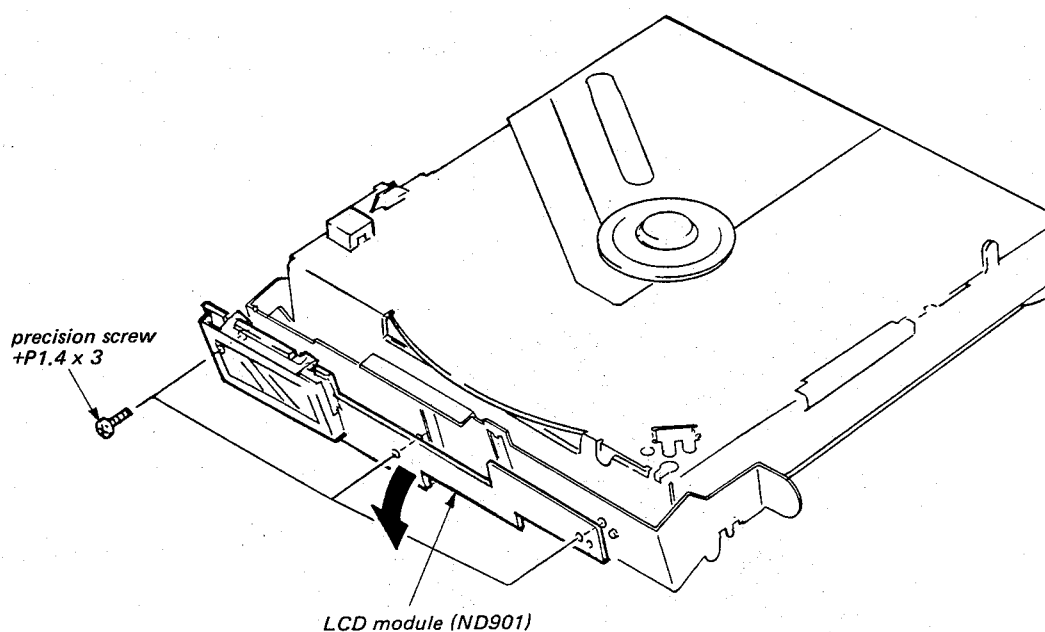


CD CABINET

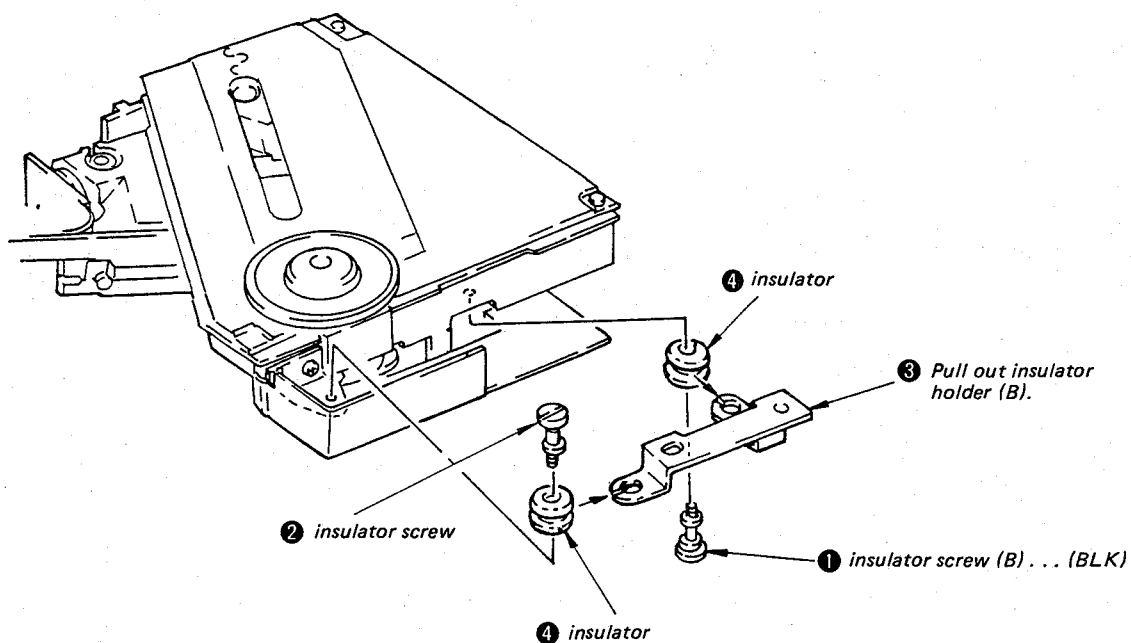




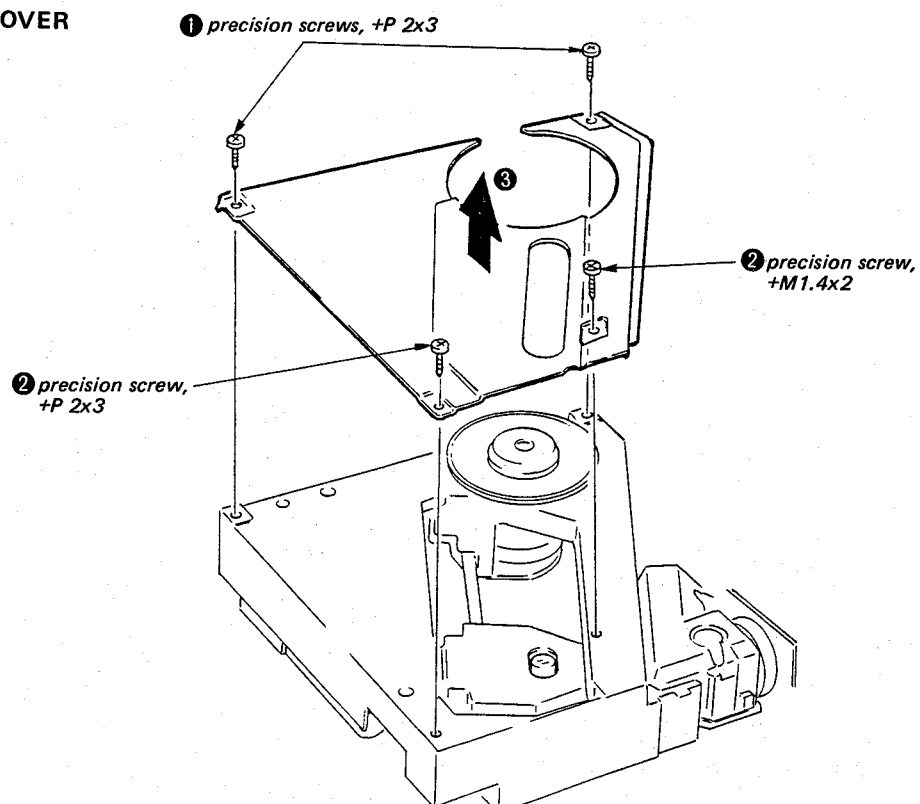
LCD MODULE (ND901)



INSULATOR

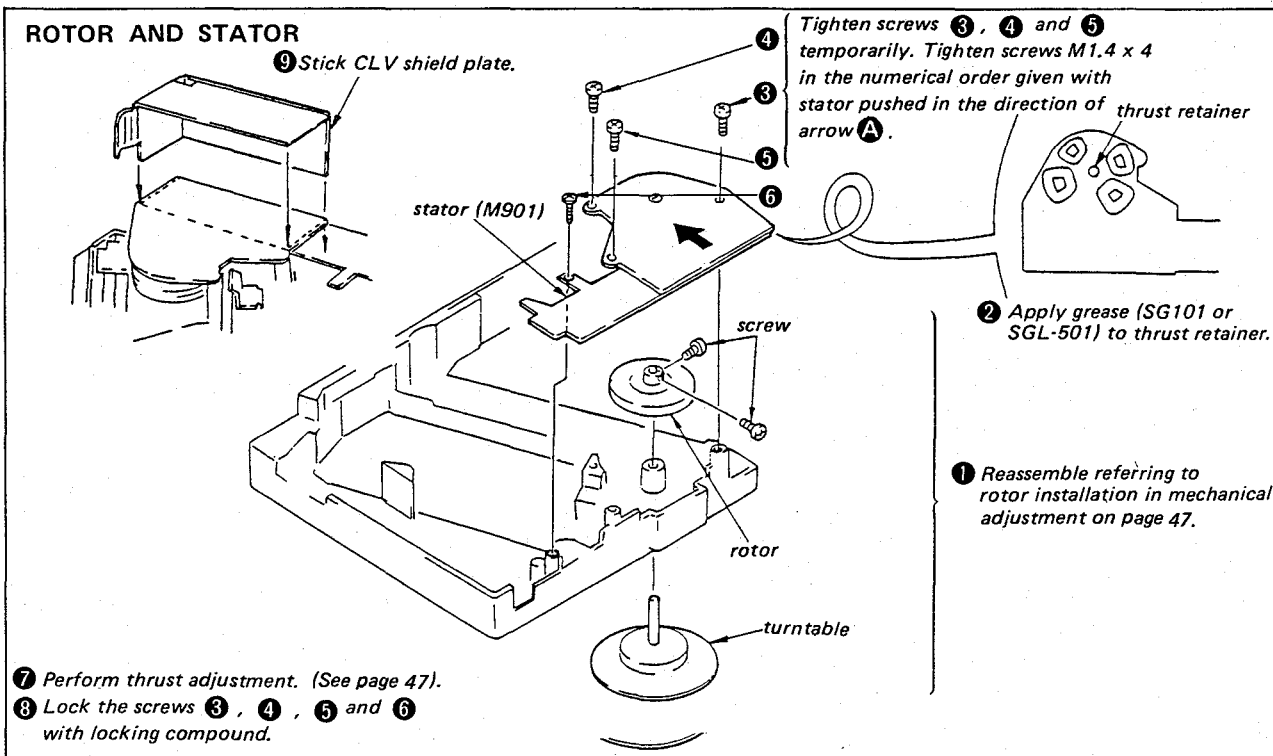


MD COVER

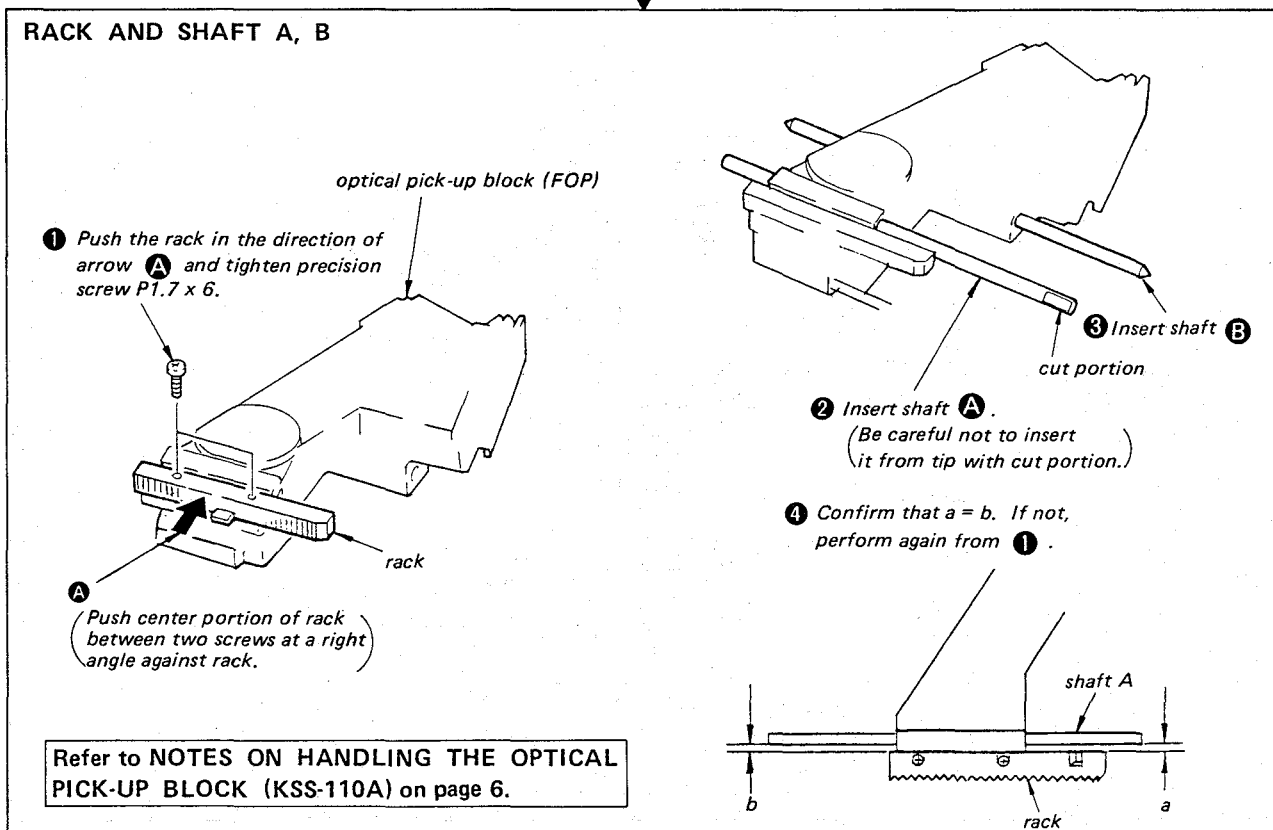


2-2. REASSEMBLY OF MECHANISM OF CD SECTION

Note: Follow the reassembly procedure in the numerical order.



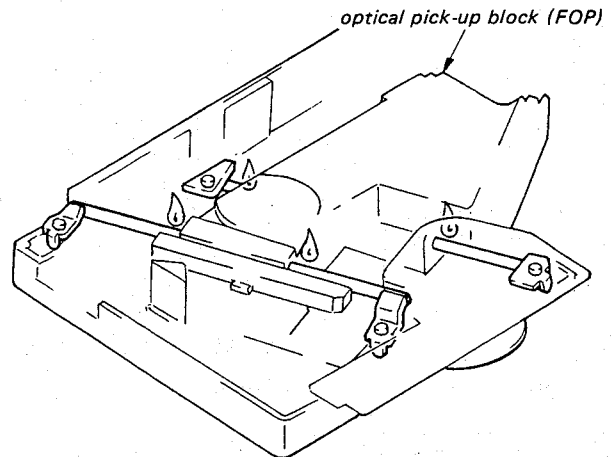
RACK AND SHAFT A, B



Refer to NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK (KSS-110A) on page 6.

LUBRICATION TO SHAFTS A, B

- ① Apply a drop of hydro fluid EP-56 (part no. 7-661-018-01) to four portions marked .
- ② Move FOP right and left two or three times to smooth them.
- ③ Lift up mechanical section and incline it in the right or left direction. Confirm that FOP is moved smoothly with its self-weight.



OPTICAL PICK-UP BLOCK

When replacing optical pick-up block, confirm and adjust the following items in the numerical order given.

1. Tracking balance adjustment (Page 58)
2. Sled motor offset adjustment (Page 58)
3. Focus bias adjustment (Page 59)
4. Tracking gain adjustment (Page 60)

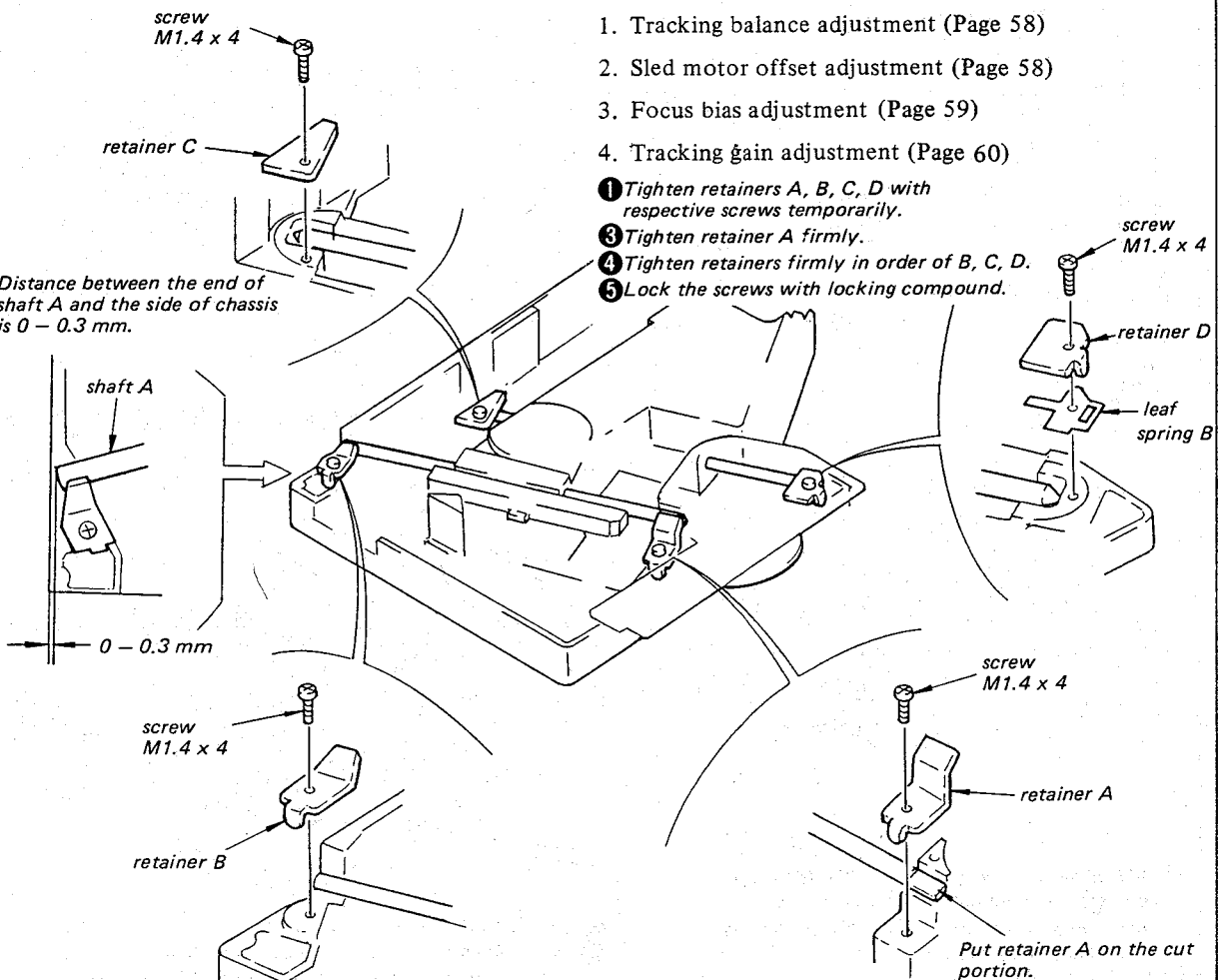
① Tighten retainers A, B, C, D with respective screws temporarily.

② Tighten retainer A firmly.

③ Tighten retainers firmly in order of B, C, D.

④ Lock the screws with locking compound.

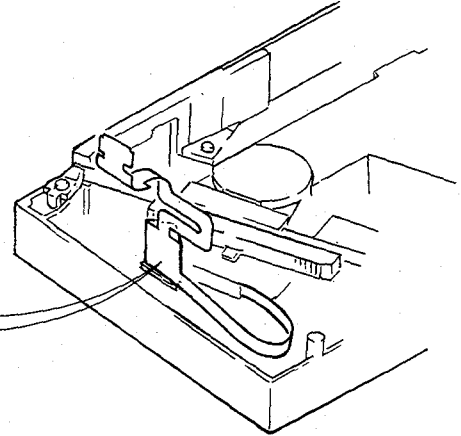
- ② Distance between the end of shaft A and the side of chassis is 0 – 0.3 mm.



Refer to NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK (KSS-110A) on page 6.

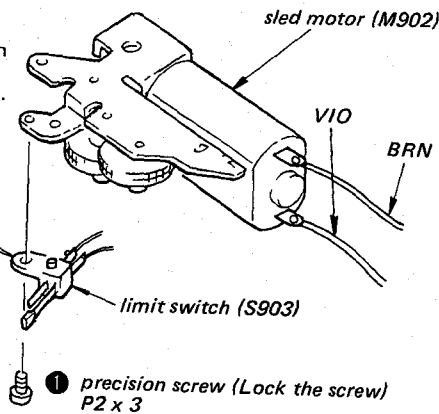
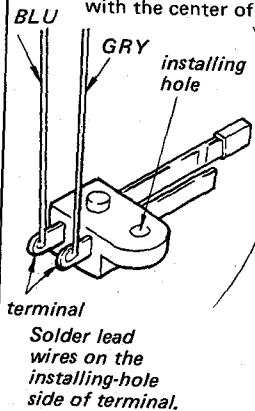
ATTACHMENT OF FLEXIBLE BOARD

- 1 Stick double-sided adhesive tape
- 2 Stick flexible board vertically with double-sided adhesive tape to bottom face of chassis while facing the center of flexible board and that of post as illustrated. (If not, flexible board may be touched to bottom of chassis.)
- 3 Confirm that this face (lower face) does not touch bottom face of chassis.

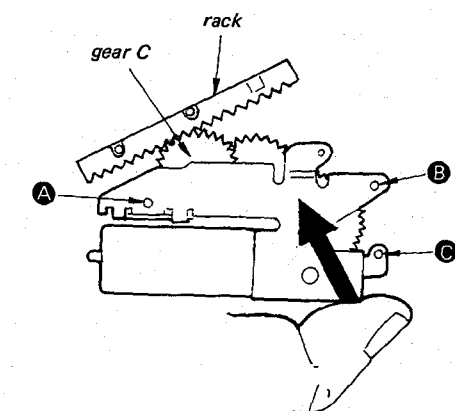
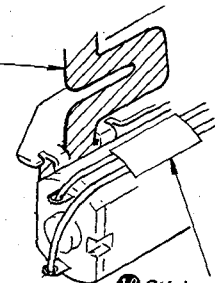


SLED MOTOR

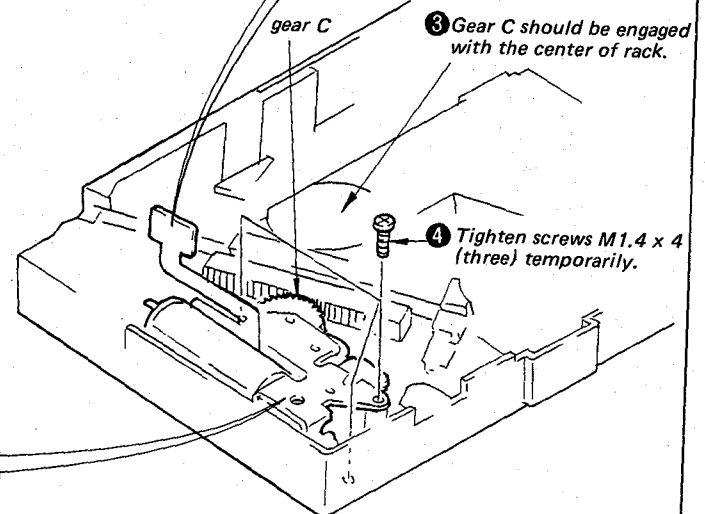
Note: Sled motor should be installed at the position where gear C engages with the center of rack.



- 2 Insert flexible board from FOP in the position as illustrated.



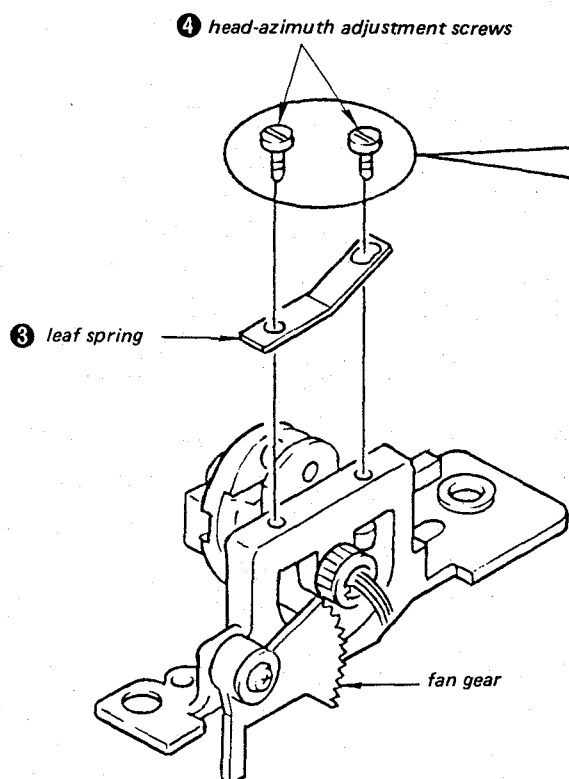
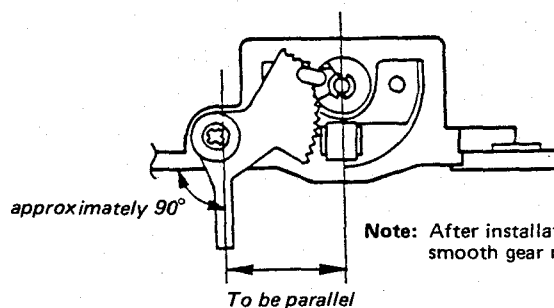
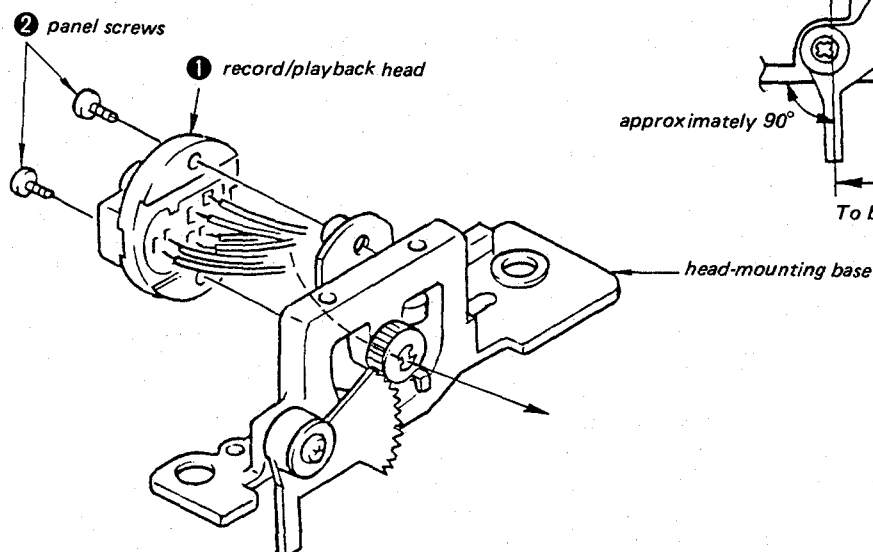
- 5 Engage rack and gear C and lock screws A and B while pushing sled motor in the direction of arrow (at a right angle against rack) with about 300 g tension.
- 6 Lock screw C firmly.



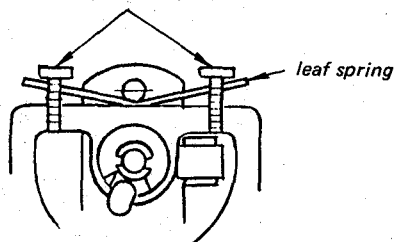
- 7 Check backlash (Refer to page 46).
- 8 Check sled motor response (Refer to page 46).
- 9 Lock screws A, B and C with locking compound.

INSTALLING THE RECORD/PLAYBACK/ERASE HEAD

Installation of Fan Gear



6 By turning the record/playback head to both forward and reverse positions, preliminarily set the both head-azimuth adjustment screws so that the head positions almost in parallel with the tape-travel path.



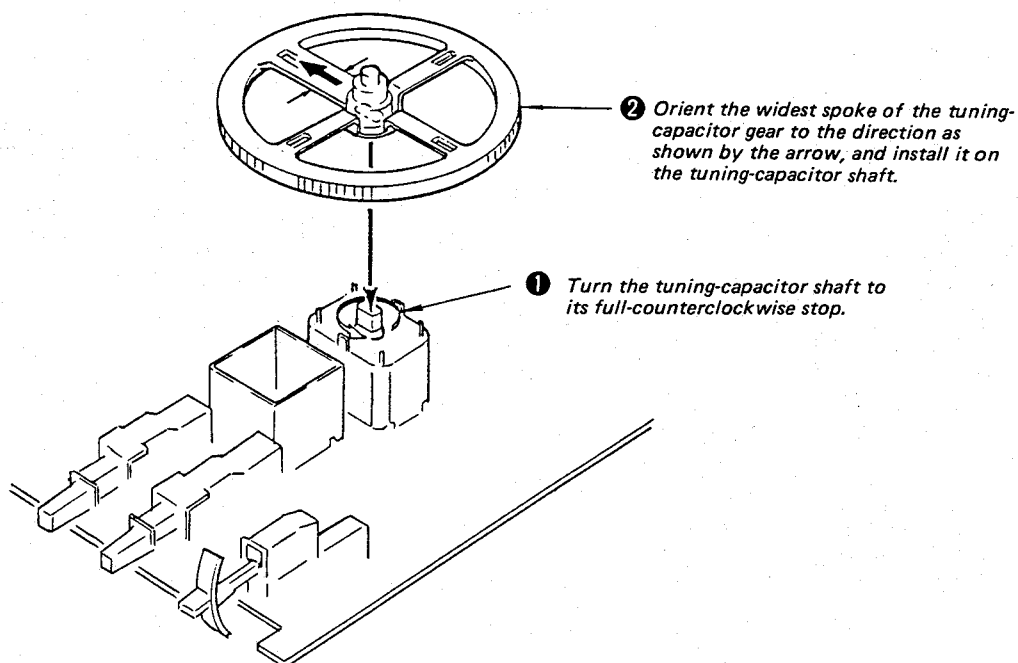
7 Perform the Tape-Path Adjustment in the Mechanical Adjustments section.

8 Perform the Record/playback Head Azimuth Adjustment in the Electrical Adjustments section.

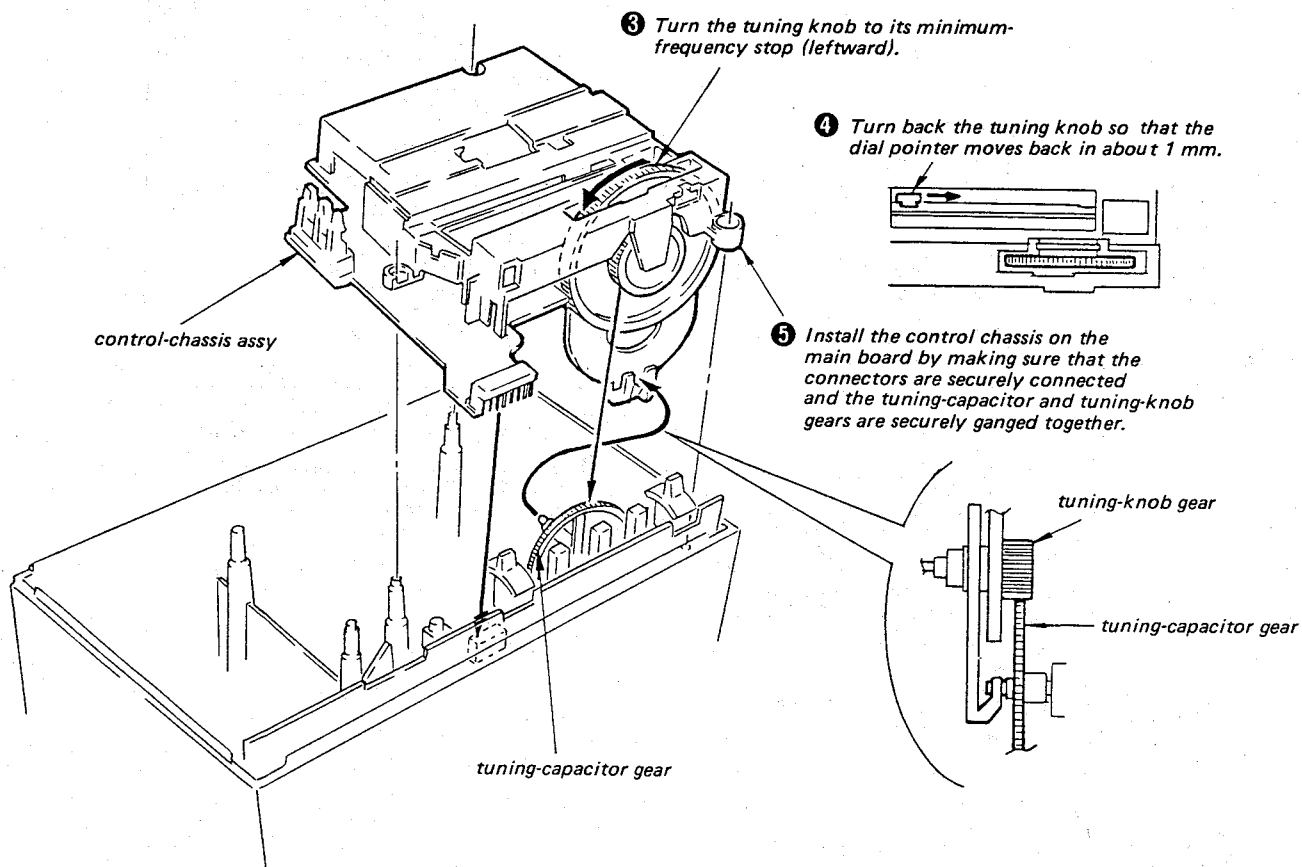
5 Reinstall head-mounting base on the head chassis.

REINSTALLING THE CONTROL BOARD

1. Mounting the Tuning-Capacitor Gear



2. Installation of the Control Chassis



SECTION 3

ADJUSTMENTS

3-1. MECHANICAL ADJUSTMENTS

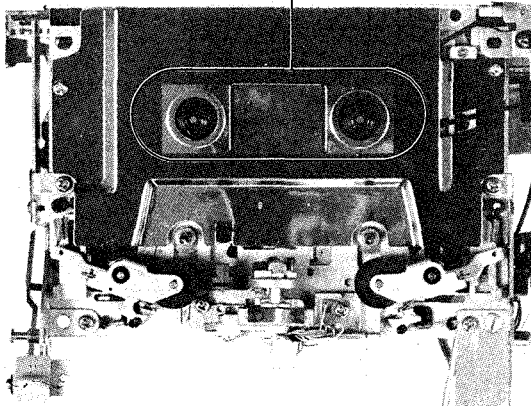
3-1-1. TAPE DECK SECTION

Notes

1. Before adjusting, wipe the following parts with a cloth moistened with alcohol.
 Record/playback head pinch roller
 Erase head
 capstan rubber belt
2. Degauss the Record/PB/Erase head with a head degausser.
3. Do not use a magnetized screwdriver for adjustments.
4. After adjusting, screw-lock the adjusted parts.
5. Unless otherwise indicated, perform adjustments at specified voltage.

Torque Measurements

Torque	Torque Meter	Measured Value
FWD torque	CQ102C	24 – 55 g·cm (0.33 – 0.76 oz·inch)
FWD back tension torque	CQ102C	2 – 5 g·cm (0.33 – 0.76 oz·inch)
REV torque	CQ102RB	24 – 55 g·cm (0.33 – 0.76 oz·inch)
REV back tension torque	CQ102RB	1.5 – 5 g·cm (0.02 – 0.07 oz·inch)
FF-REW torque	CQ201B	75 – 130 g·cm (1.04 – 1.80 oz·inch)



Note: Perform the Fast-Forward and Rewind torque measurements after operating the set in one cycle of fast-forward → stop → fast-reverse modes.

Tape Path Adjustment

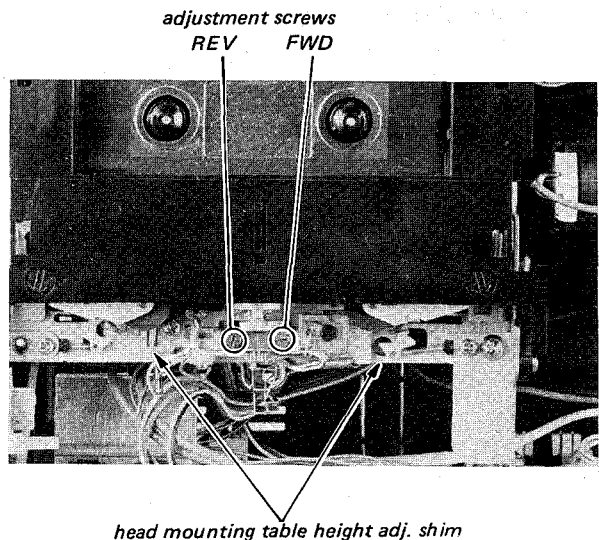
Be sure to perform this adjustment when replacing the record/playback/erase head, or head mounting table assembly.

– PB mode –

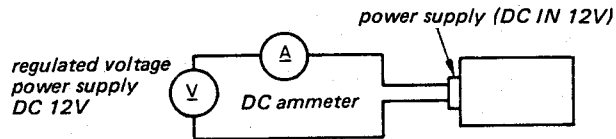
1. Use a mirror cassette and adjust for no tape curl.
2. Change the head mounting table assembly height adjustment shim so that the REC/PB head core position is correct for both FWD/REV without tape curls and twists.

Head Mounting Table Height Adjustment Shim

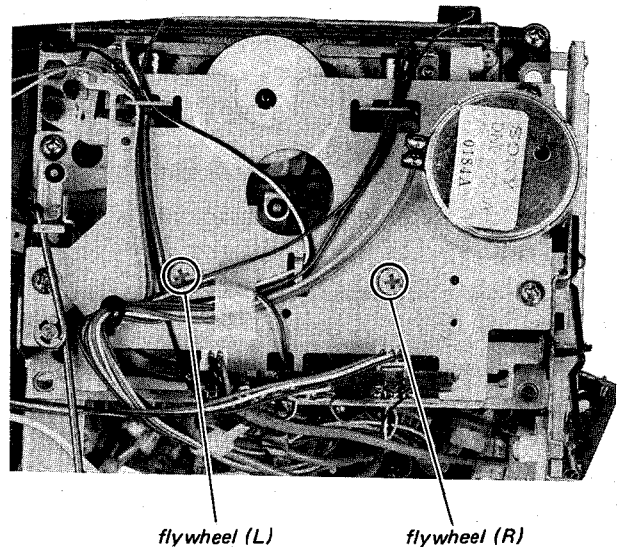
Part No.	thickness
3-313-757-01	0.1 standard
3-313-757-11	0.15
3-313-757-21	0.2



Thrust Play Adjustment

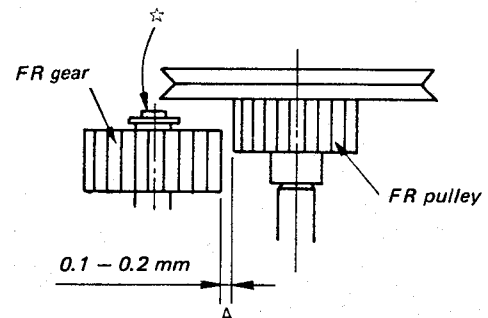


1. Loosen the adjustment screw by turning counter-clockwise.
 2. Put the set in FWD mode and turn the adjustment screw clockwise little by little to tighten.
 3. Current will increase suddenly at a certain point. Loosen $\frac{1}{4}$ turn from this point and set.
 4. After adjustment, lock the screws.
- Referecne: thrust screw pitch
0.5mm/1 rotation
- Specification: flywheel · flywheel (R)
within 0.15 – 0.35mm.



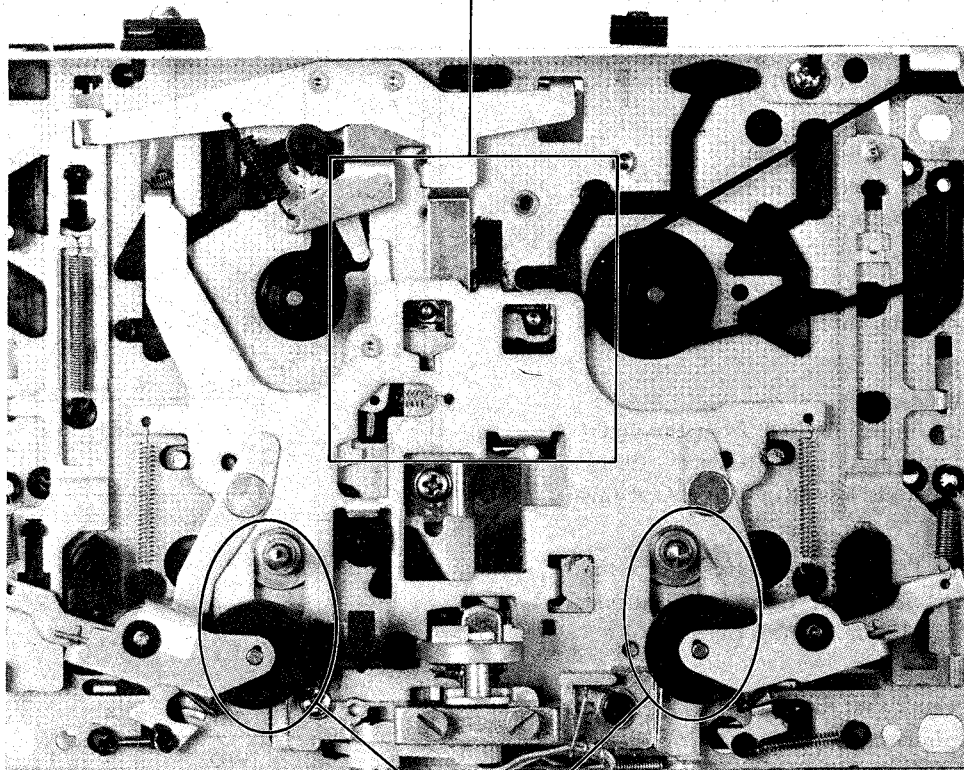
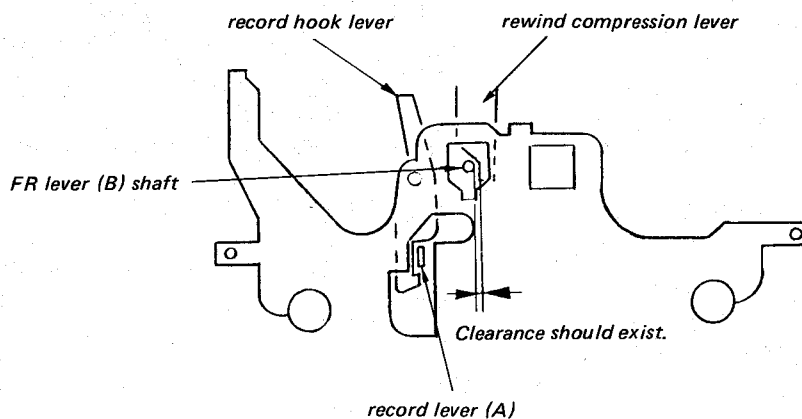
FR Gear Clearance Adjustment

Put the set in STOP mode, and bend the part marked ☆ so that the clearance A is 0.1 – 0.2mm.



FR Lever (B) Clearance Adjustment

When the mode is changed from rewind to fast-forward, clearance should exist between the FR lever (B) and rewind compression lever as shown below.



Clearance should exist between the capstans and pinch rollers in the AMS fast-forward mode both in forward and reverse conditions.

3-1-2. CD Player Section

Backlash Check

Measuring Locations:

Outer circumference: Where dimension A in the figure at right (space between FOP and retainer B) is 3-5 mm.

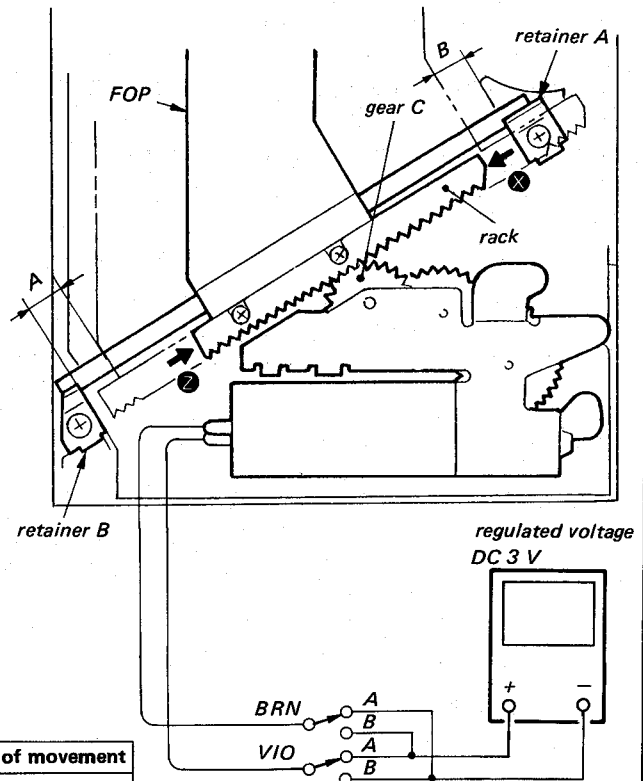
Middle circumference: Location where gear C engagement point is at the center of the rack.

Inner circumference: Where dimension B at right (space between FOP and retainer A) is 3-5 mm.

Measuring Procedure:

1. Apply 3 V to sled motor leads and move the FOP to the measuring location. (Refer to figure).
2. At each measuring location, check that there is no movement in the directions of the arrows marked $\otimes$ and $\otimes$ when 50 g is applied to a fan-shaped tension gauge.
3. If there is movement, sled motor mounting should be redone. (Refer to page 40, Sled Motor Assembly.)

Switch position	Direction of movement	Switch position	Direction of movement
side A	inner to outer circumference	side B	outer to inner circumference



Sled Motor Response Check

If the following check is not satisfied, replace the sled motor (M902).

• Minimum Activation Voltage Check.

1. Apply 1.5 V and check that the FOP moves smoothly from the inner to the outer circumference.
2. Next apply 2 V and check that the FOP moves smoothly from the outer to the inner circumference.

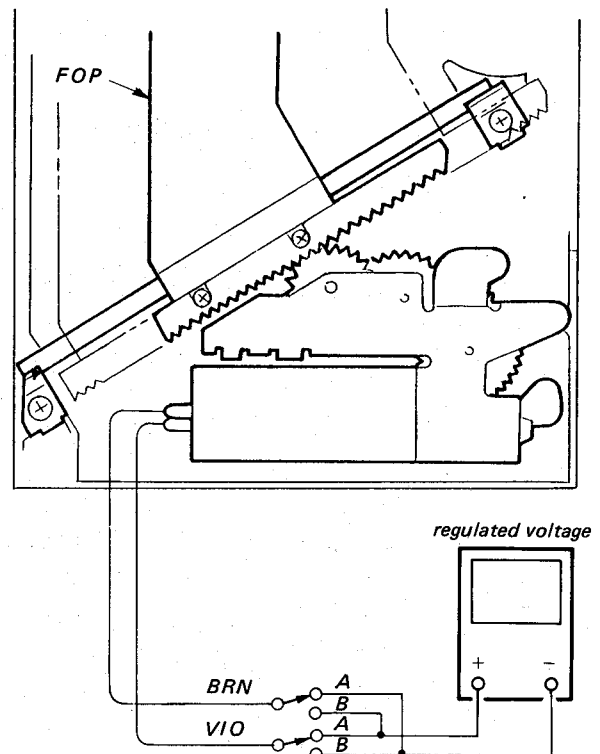
• Sledding Current Check

1. Apply 3 V and move the FOP from the innermost to the outermost circumference. Check that current value is less than 120 mA at this time.
2. Next move the FOP from the outermost to the innermost circumference. Check that current value is less than 150 mA at this time.

• Sledding Time Check

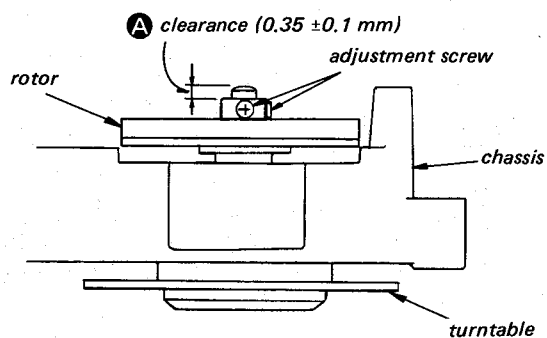
Apply 3 V, and check that the time for the FOP to move from the innermost to the outermost circumference and from the outermost to the innermost circumference is less than 5 seconds each.

Switch position	Direction of movement	Switch position	Direction of movement
side A	inner to outer circumference	side B	outer to inner circumference



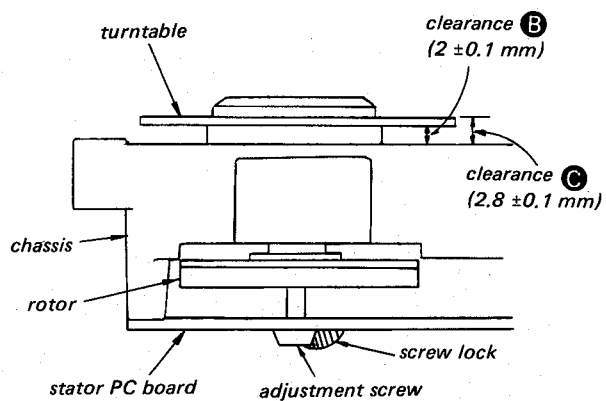
Rotor Mounting, Thrust Adjustment

• Rotor Mounting



Mount the rotor on the turntable shaft so that the clearance A above is 0.35 ± 0.1 mm.

• Thrust Adjustment



Adjust the adjustment screw so that clearances **B** and **C** above are as follows:

B: 2 ± 0.1 mm

C: 2.8 ± 0.1 mm

Lock the screw after adjustment.

3-2. ELECTRICAL ADJUSTMENTS

3-2-1. TAPE-RECORDER SECTION

1. Perform adjustment in the order given. (As a general rule, perform recording system adjustment after completing playback system adjustment.)
2. Unless otherwise indicated, perform adjustment and measurement for each channel.
3. Switch, control knob positions

FUNCTION TAPE
 TAPE SELECT NORMAL
 DOLBY NR OFF
 ISS 2
 VOLUME minimum or required
 GRAPHIC
 EQUALIZER mechanical center

4. Specified recording position

Adjust the VOLUME knob to obtain the following specified input/output signal levels.

Specified input level

Input pin	MIX/MIC	LINE IN
Signal level impedance	300Ω	10kΩ
Input signal level	4.9mV (-44dB)	0.44V (-5dB)

Specified output level

Output pin	SP OUT	LINE OUT
Load impedance	4Ω	47kΩ
Output signal level	0.775V (0dB)	0.28V (-8.9dB)

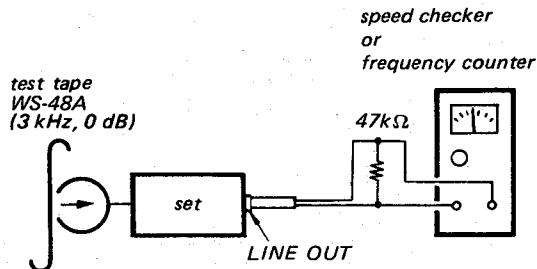
0dB = 0.775V

5. Reinstall the control and button boards and deck mechanism in the connectors on the main board.
6. Refer to the separate sections for adjustments to CD player section.

Tape Speed Adjustment

Procedure:

Mode: forward playback

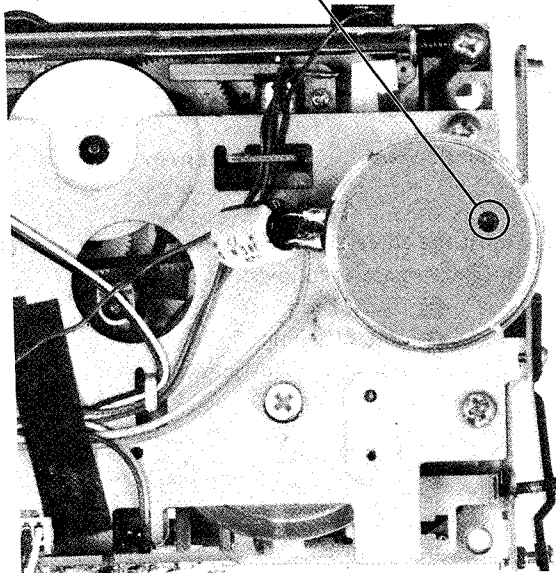


Specification:

3,000 Hz, +90 Hz, -75 Hz

Adjust so that frequency difference at beginning and end of winding is 1% (30Hz).

Adjustment Location: Adjust variable resistor inside motor.
 (Insert screwdriver to adjust. Speed increases when turned clockwise.)



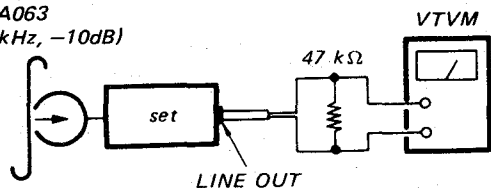
Record/playback Head Azimuth Adjustment

Perform for both forward and reverse playback modes.

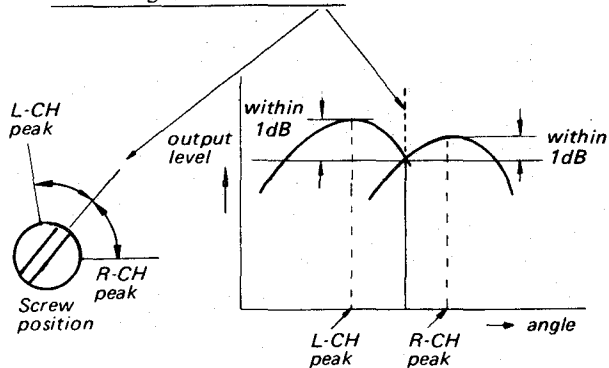
Procedure:

1. Mode: playback

test tape
P-4-A063
(6.3kHz, -10dB)



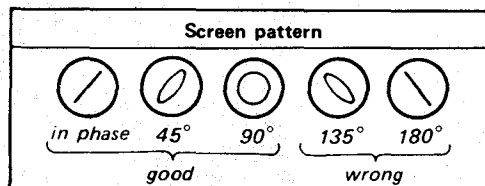
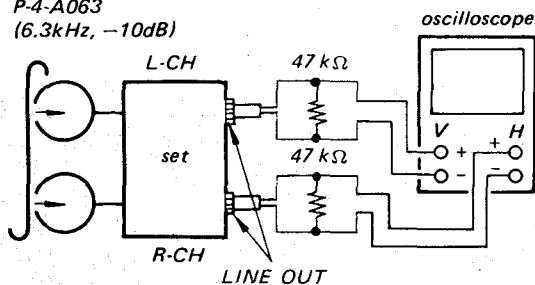
2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 1dB.



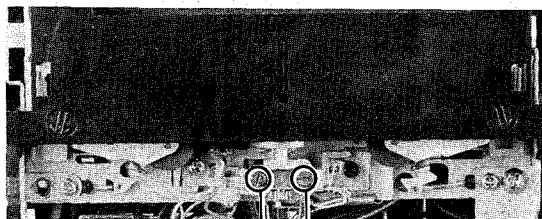
3. Phase Check

Mode: playback

test tape
P-4-A063
(6.3kHz, -10dB)



Adjustment Location:



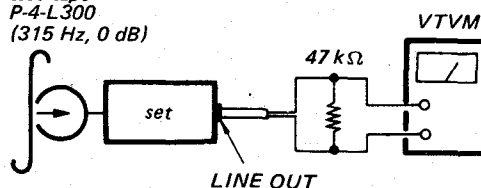
REV FWD
azimuth adjustment

Playback Level Adjustment

Procedure:

— Playback mode —

test tape
P-4-L300
(315 Hz, 0 dB)



Specification:

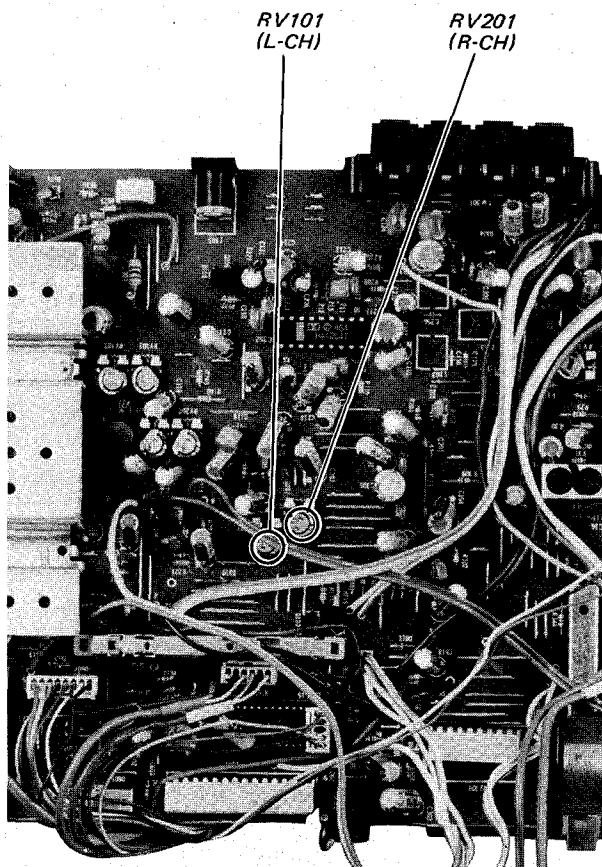
LINE OUT level: $0.28 \pm 0.01V$
($-8.9 \pm 0.2dB$)

Level difference between channels:
within 0.3 dB

Confirm that LINE OUT level does not change when playback, STOP are repeated.

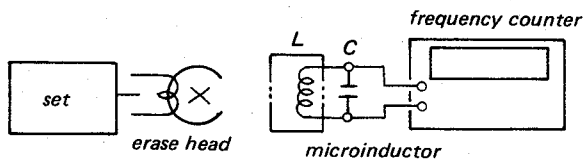
Adjustment Location: Main board

(Note: Also accessible through holes in the bottom of rear cabinet.)



Record Bias Oscillation Frequency Adjustment

Procedure:



Examples of L-C combination:

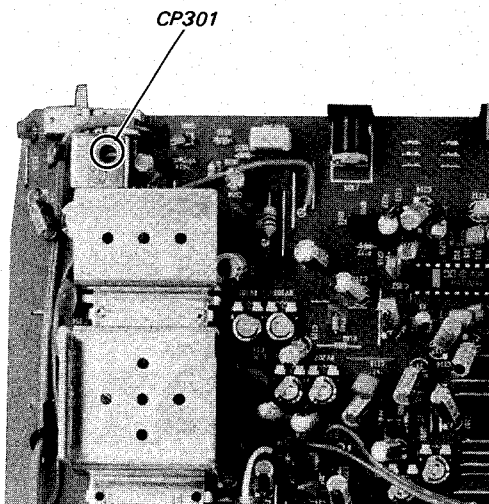
L (microinductor)	C (capacitor)
47 μ H	0.075 μ F
56 μ H	0.062 μ F
68 μ H	0.051 μ F
82 μ H	0.043 μ F
100 μ H	0.036 μ F
150 μ H	0.022 μ F
1mH	0.0036 μ F

1. Set for no signal recording state.
Remove cassette lid, close cassette holder, push leaf switches on top of cassette compartment, and push record and play buttons.
2. Bring the microinductor connected to the frequency counter close to the erase head core.
3. Adjust CP301 with the ISS switch set to 2 (normal position) so that frequency becomes in 85.0kHz $\pm$ 2.0kHz.
4. Change the ISS switch to 1 and 2 and check for the frequencies respectively.

Adjustment Values:

ISS switch 1: 88.0kHz $\pm$ 2.0kHz
ISS switch 3: 81.5kHz $\pm$ 2.0kHz

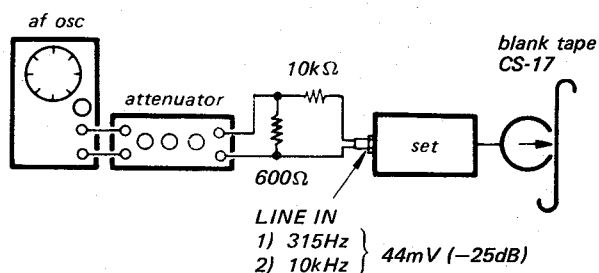
Adjustment Location: Main board



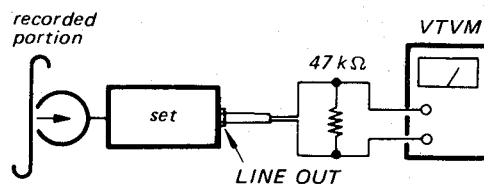
Record Bias Adjustment

Procedure:

1. Mode: record



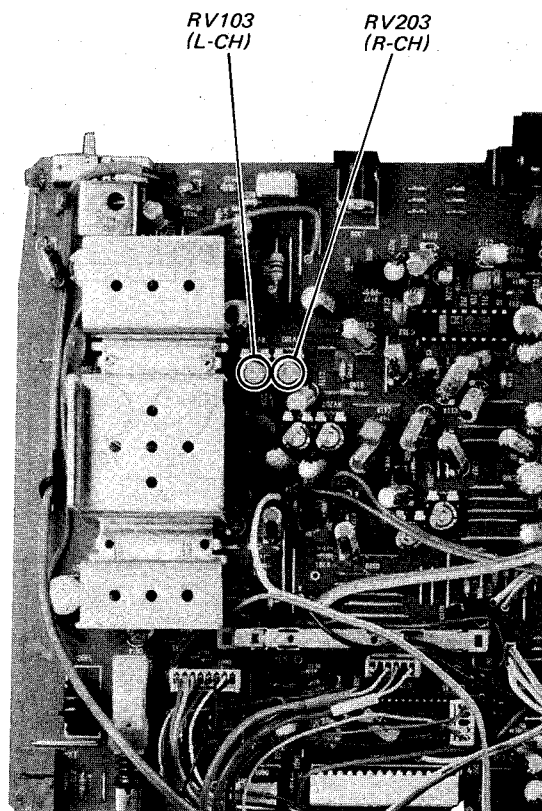
2. Mode: playback



Adjust RV 103 (L-CH) and RV 203 (R-CH) so that the 10kHz playback output difference is $-0.2\text{dB} \pm 0.5\text{dB}$ relative to 315Hz playback output.

Adjustment Location: Main board

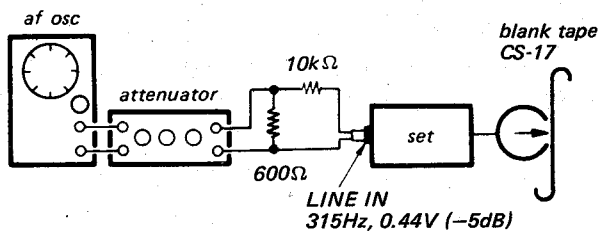
(Note: Also accessible through holes in the bottom of rear cabinet.)



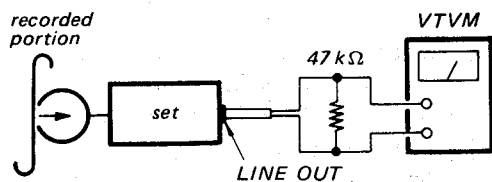
Record Level Adjustment

Procedure:

1. Mode: record



2. Mode: playback



Adjust RV102 (L-CH) and RV202 (R-CH).

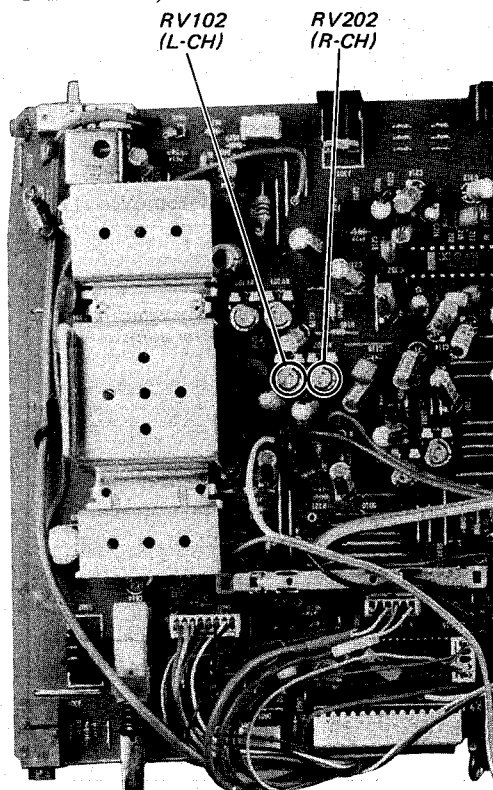
3. Repeat steps 1 and 2 several times until no improvement is obtained.

Specification:

LINE OUT level: 0.27 – 0.29V
(-8.9dB ± 0.5dB)

Adjustment Location: Main board

(Note: Also accessible through holes in the bottom of rear cabinet.)

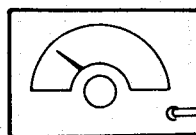


3-2-2. RADIO SECTION

AM SECTION

FUNCTION switch: RADIO
BAND SELECT switch: AM

AM RF SSG



Bring lead wire antenna close to set.

400Hz, 30%
AM modulation

Output: usable lowest possible

- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

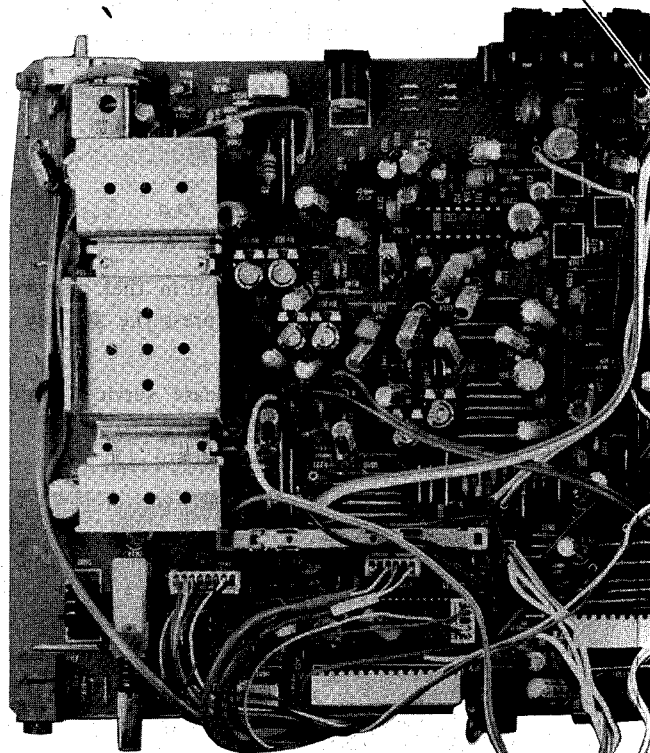
AM IF ALIGNMENT

Adjust for maximum reading on VTVM.

455kHz

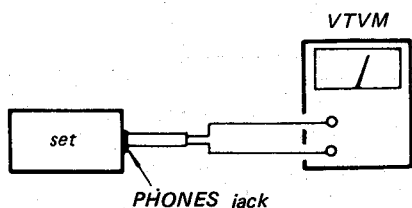
T3

[AM]



FUNCTION switch
top

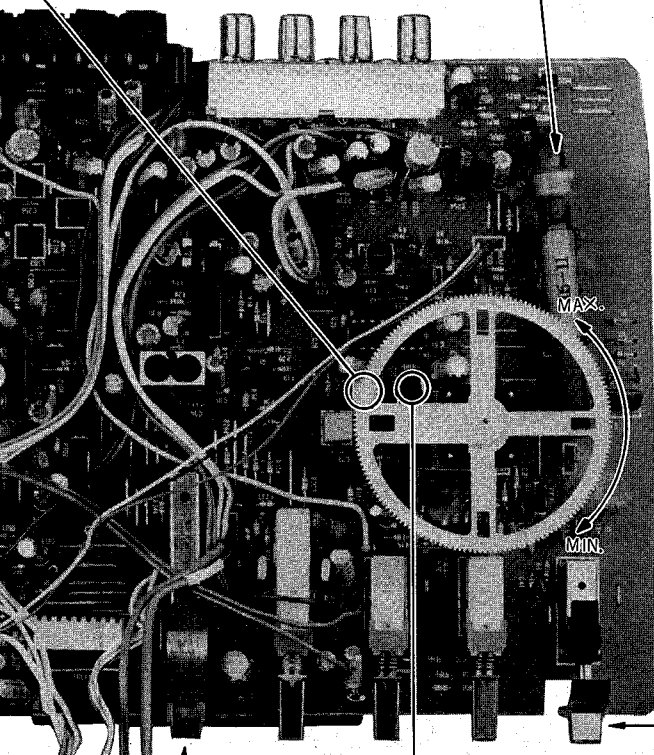
bottom



AM TRACKING ADJUSTMENT

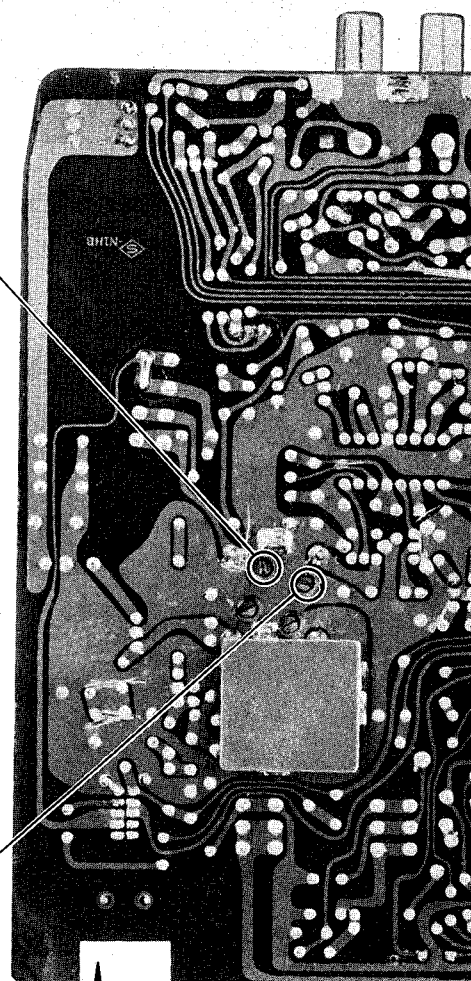
Adjust for maximum reading on VTVM.

620kHz	1,400kHz
L4	CT3



ION switch
top
switch
CD
LINE IN
RADIO
bottom : TAPE

T2	CT4
520kHz	1,680kHz
tuning capacitor MAX. (f min)	tuning capacitor MIN. (f max)
Adjust for maximum reading on VTVM.	
AM FREQUENCY COVERAGE ADJUSTMENT	

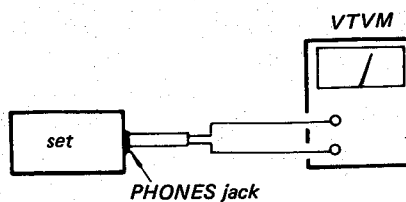
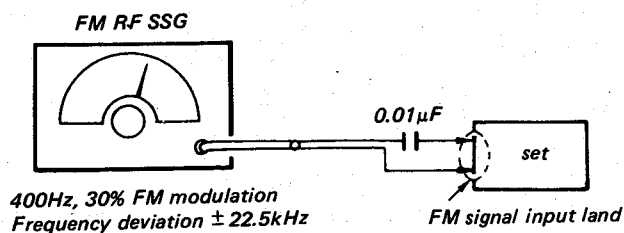


BAND SELECT switch
top : AM
center : FM MONO
bottom : FM STEREO

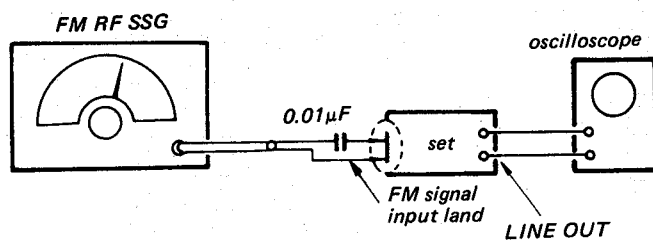
FM SECTION

FUNCTION switch: RADIO

BAND SELECT switch: FM MONO or FM STEREO

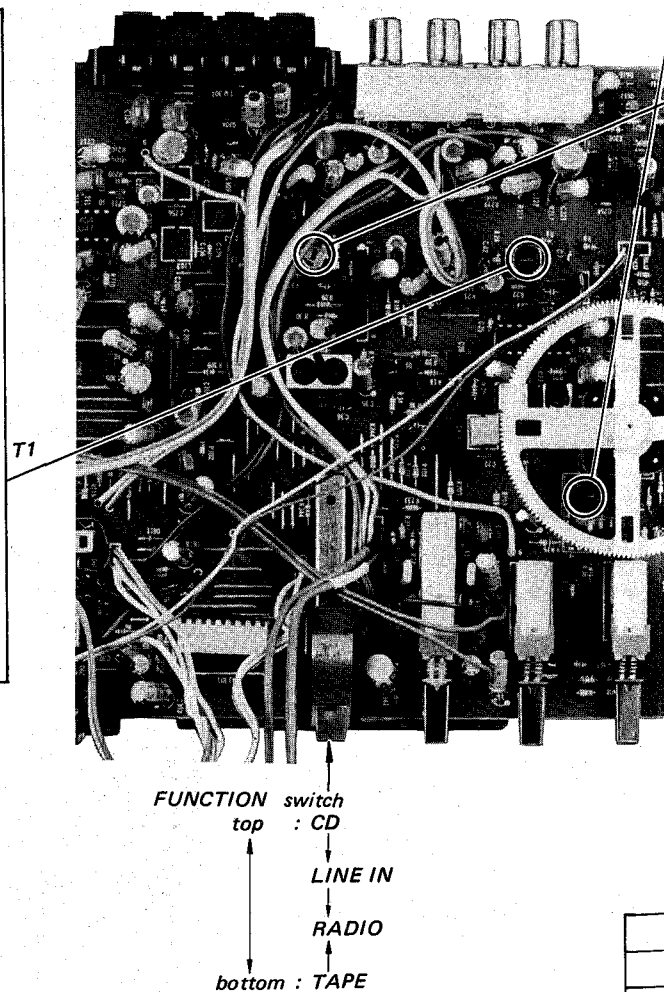


- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

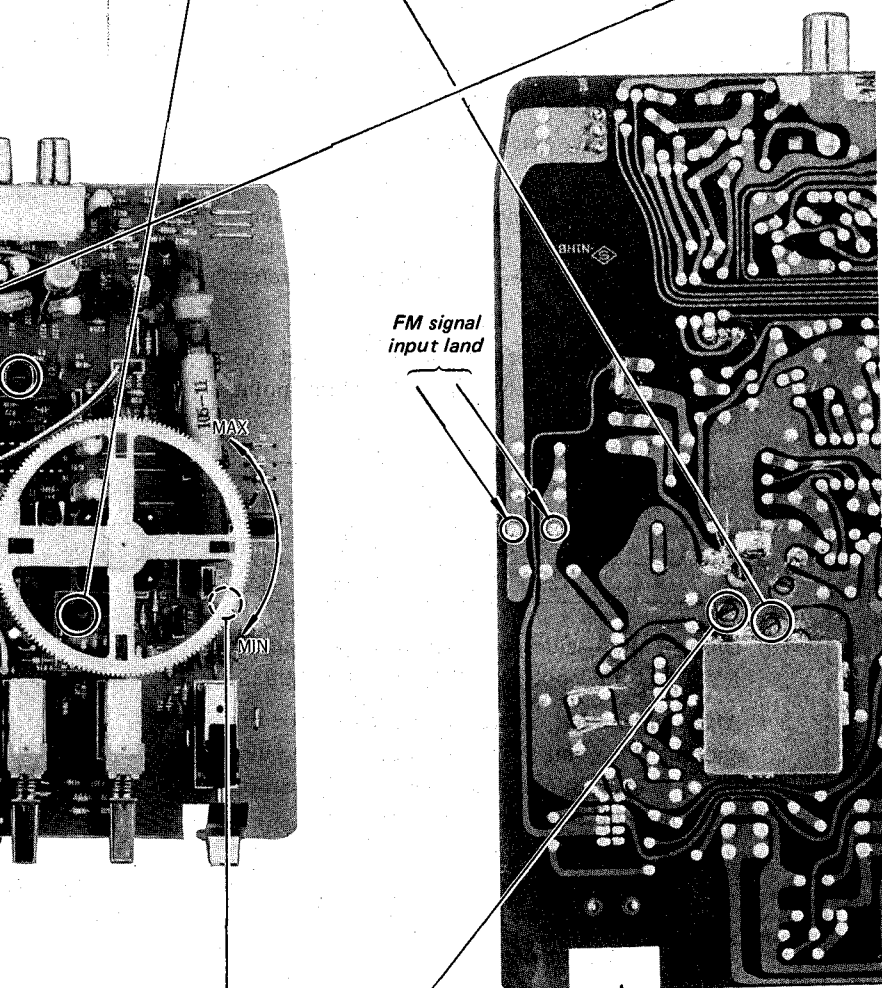
FM Discriminator Adjustment**Procedure:**

Carrier frequency: 98MHz
Modulation: 1kHz, 25kHz deviation (100%)
Output Level: 1mV (60dB)
Mode: monaural

- Tune to 98MHz.
- Adjust T1 so that the top and bottom of the waveform are symmetrical.

[FM]

FM FREQUENCY COVERAGE ADJUSTMENT	
Adjust for maximum reading on VTVM.	
tuning capacitor MAX. (f min)	tuning capacitor MIN. (f max)
86.5MHz	109.5MHz
L3	CT2



L1	CT1
86.5MHz	109.5MHz
tuning capacitor MAX. (f min)	tuning capacitor MIN. (f max.)
Adjust for maximum reading on VTVM.	
FM TRACKING ADJUSTMENT	

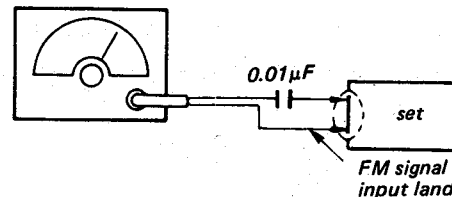
BAND switch
top : AM
center : FM MONO
bottom : FM STEREO

VCO Adjustment

A) Regular Method

Procedure:

FM RF SSG



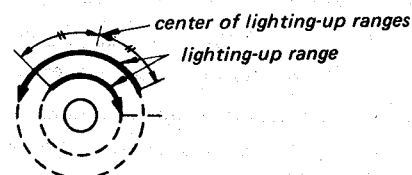
Carrie frequency: 98MHz
Modulation: demodulated
Output level: 1mV (60dB)

1. Tune to 98MHz.
2. Adjust RV1 so that the frequency counter reading is 38kHz ±0.1kHz

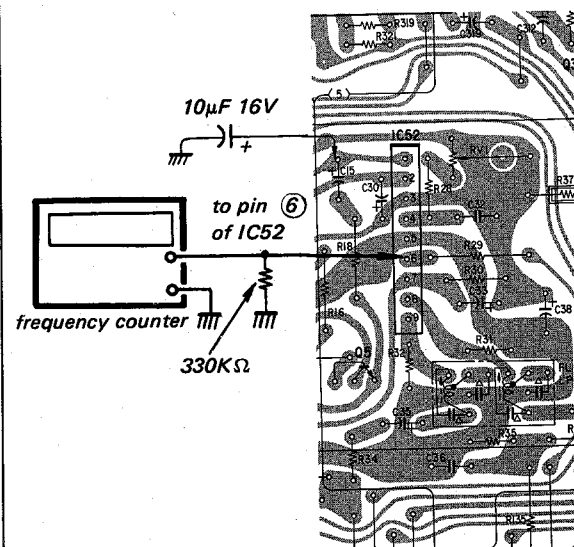
B) Simple Method

Procedure:

1. Receive an FM stereo broadcast.
2. Turn RV1 left and right, and set it at the center of overlapping FM STEREO lamp lighting-up ranges.



Adjustment Location: Main board



3-2-3. CD Player Section

Notes on Adjustment

1. Perform adjustments in service mode.
Be sure to release service mode after completing adjustment.
2. Perform adjustments in the order given.
3. Use test disc YEDS-1, but only when disc use is indicated.
4. Power supply voltage: DC 9 V
Power switch: ON

PREPARATION

Put the set into service mode (See pages 10 to 16) and perform the following checks. Repair if there are any abnormalities.

● Sled Motor Check

1. Press the OPEN button and open the top panel.
2. Press the ►►, ◄◄ keys and make sure that the FOP moves smoothly, without catching, from the inmost → outmost → inmost circumference.

►►: FOP moves outward

◄◄: FOP moves inward

● Focus Search Check

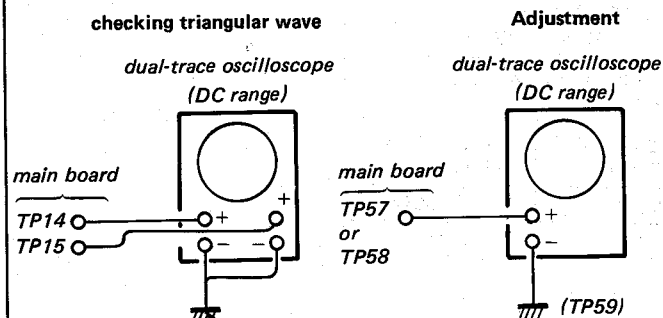
1. Press the OPEN button and open the top panel.
2. Press the ►■■ key. Focus search is performed continuously. Laser does not emit.
3. Observe the FOP objective lens and check that it moves smoothly up and down with no catching or noises.
4. Press the ■ key.
Check that focus search operation stops. If it does not, press the ■ key again, longer.

TRIANGULAR WAVE ADJUSTMENT

Conditions:

Set the ground levels of dual-trace oscilloscope CH1 and CH2 so that they are on the 0V center line.

Adjustment Method:



1. Connect the dual-trace oscilloscope to main board test points TP14 and TP15.
2. Put the set into service mode (refer to pages 10-14).
3. Observe the oscilloscope waveform and remember if offset voltage is off on the + or - side relative to 0 V. (Refer to triangular wave reference waveform).
4. Depending on the offset voltage, connect the dual-trace oscilloscope to main board test point TP57 or TP58.

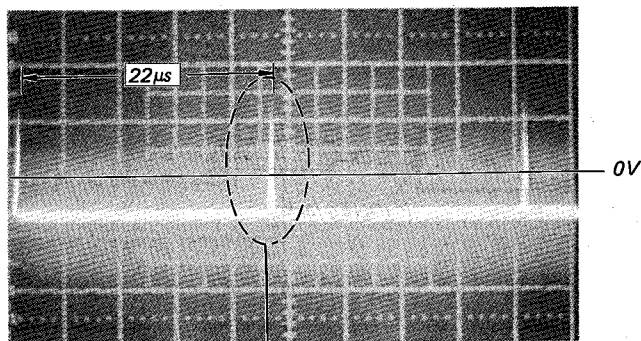
Offset voltage difference	Connection
-	TP 58 (IC507 ①)
+	TP 57 (IC507 ④)

5. Observe the oscilloscope waveform, and adjust RV503 so that pulse width is less than 200nS.
6. After adjustment, check the waveform for the another test point (TP57 or TP58). If the pulse width is over 200nS, the test point connection was wrong in step 4. Repeat steps after 4.

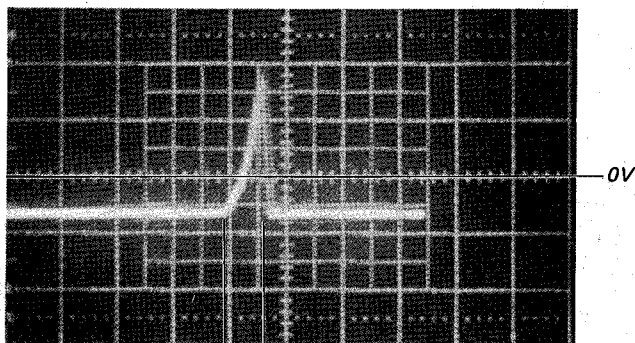
• Waveform for reference

VOLT/DIV: 1 V

TIME/DIV: 5 μ S



Pulse waveform with TIME/DIV enlarged to 200nS.



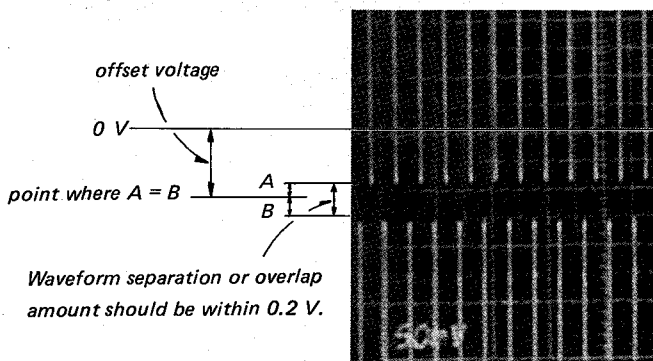
Adjust this width to less than 200nS.

7. Connect the dual-trace oscilloscope as in step 1 and confirm that the triangular wave separation or overlap amount is within 0.2 V.

• Triangular wave reference waveform
(shows offset voltage off in one direction)
VOLT/DIV: 50 mV TIME/DIV: 50 μ S

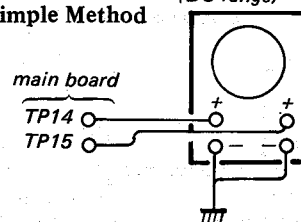
upper: TP14 (IC504 (5), (11))

lower: TP15 (IC504 (6), (8))



8. After adjustment, release service mode. (Refer to pages 10-14).

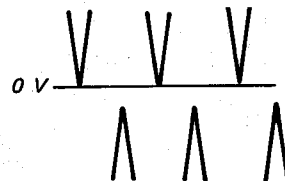
B) Simple Method



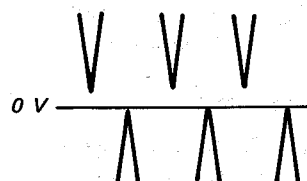
1. Connect the dual-trace oscilloscope to main board test points TP14 and TP15.
2. Put the set into service mode (refer to pages 10-14).
3. Observe the oscilloscope waveform and confirm if offset voltage is off on the + or - side relative to 0 V. (Refer to triangular wave reference waveform).
4. Depending on the offset voltage, adjust RV503 so that the tips of triangular wave are 0 V as fig. A and B below.

• Waveform for adjustment

A When offset voltage is off in - direction.
(Adjust that the upper tips of waveform are 0 V.)



B When offset voltage is off in + direction.
(Adjust that the lower tips of waveform are 0 V.)



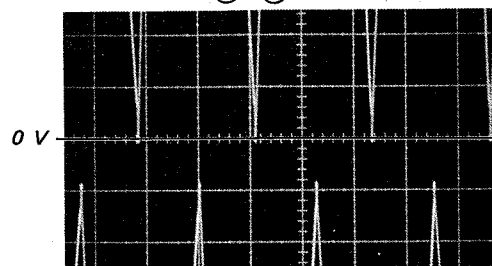
5. After adjustment, release service mode (See page 10-14).

• Waveform for reference

(Offset voltage is off in - direction)

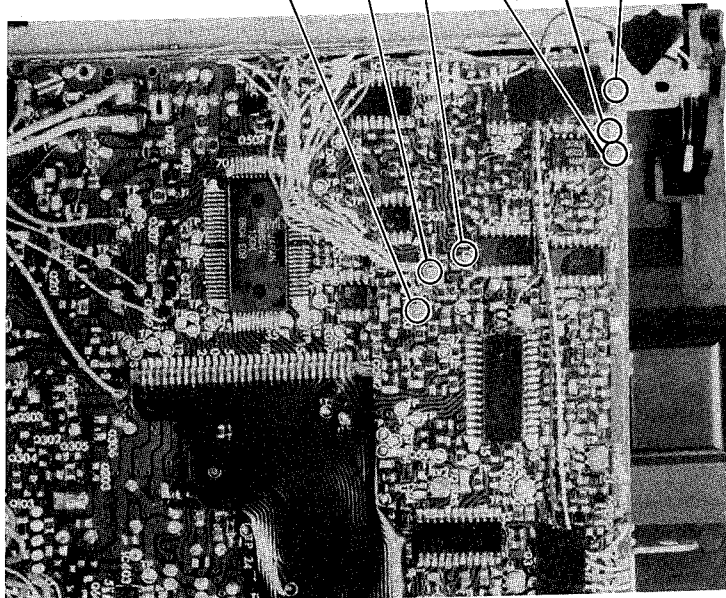
upper: TP14 (IC504 (5), (11)) VOLT/DIV: 100 mV

lower: TP15 (IC504 (6), (8)) TIME/DIV: 10 μ S



Check/Adjustment Location: Main board

RV503 TP14 TP15 TP57 TP58 TP59

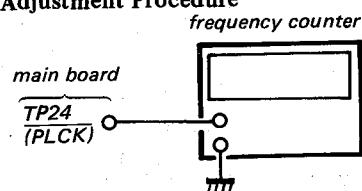


Note: TP57 when offset voltage is off in + direction.
TP58 when offset voltage is off in - direction.
TP59 (GND)

PLL FREE RUN FREQUENCY CHECK AND ADJUSTMENT

Note: Be sure to perform this when the DC-DC converter is replaced.

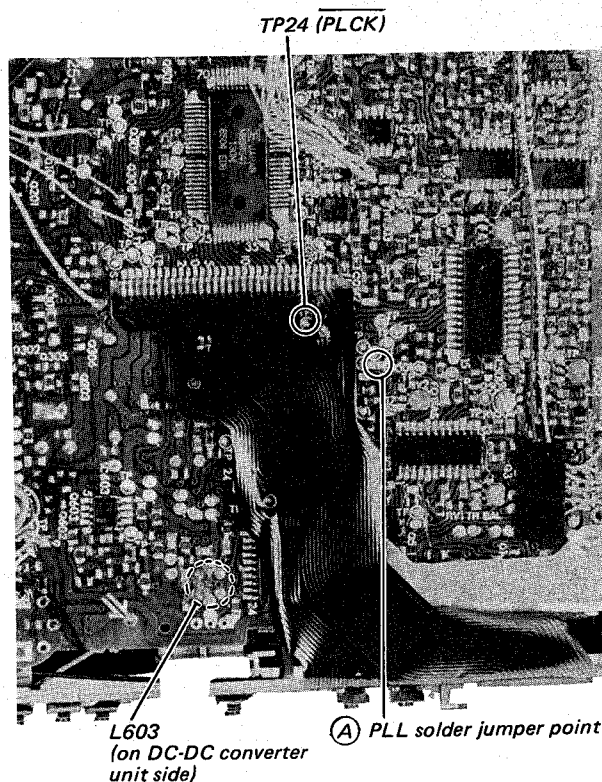
Check/Adjustment Procedure



1. Short the jumper point (A) (PLL) in the diagram below.
2. Connect a frequency counter to main board test point TP24 (PLCK).
3. Put the set into service mode (see page 10-14).
4. Check that the frequency counter reading is 4.3218 ± 0.04 MHz. If not, adjust L603 so that it is 4.3218 ± 0.01 MHz.
5. After adjustment, release service mode (see page 14).
6. Disconnect the jumper point shorted in step 1.

Check/Adjustment Location: Main board

L603 (on DC-DC converter unit side) PLL solder jumper point (Short for checking and adjustment. Disconnect after checking and adjustment.)

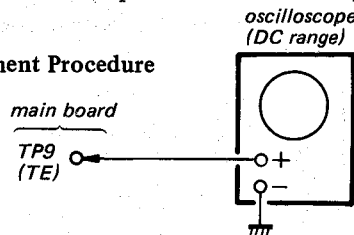


TRACKING BALANCE ADJUSTMENT

Conditions

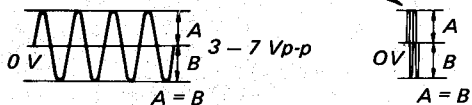
The set should be placed either vertically or horizontally.

Adjustment Procedure



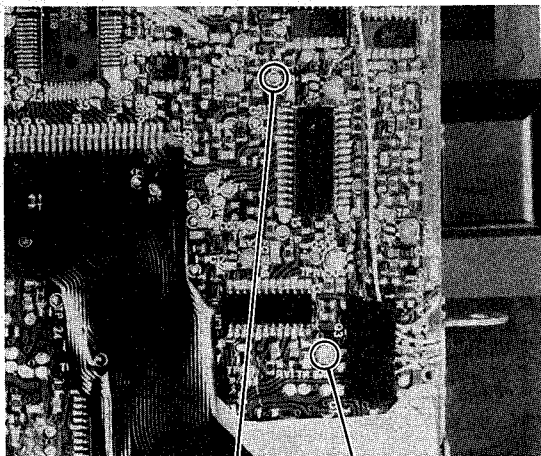
1. Connect the oscilloscope to main board TP9 (TE).
2. Put the set into service mode (see page 10-14).
3. Press the ►► and ◄◄ keys to move the FOP to the center.
4. Insert the disc (YEDS-1) and close the top panel.
5. Press the ►■■ key.
(It will go from focus search to focus ON, and then CLV pull-in mode state. Tracking and sled are OFF.)
6. Adjust RV1 so that the oscilloscope waveform is symmetrical on the top and bottom in relation to 0 V.

Note: Take sweep time as long as possible to obtain best waveform.



7. Press the ■ key. Confirm that disc rotation stops. If it does not, press the ■ key again, longer.
8. After adjustment, release service mode (see page 10-14).

Adjustment Location: main board



TP9
(TE)

RV1

SLED MOTOR OFFSET CHECK AND ADJUSTMENT

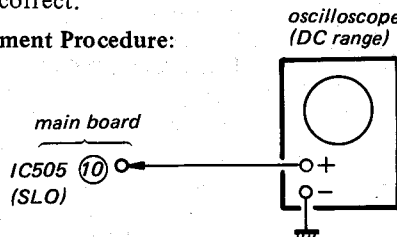
Conditions

Tracking balance adjustment should have been finished.

Close the top panel.

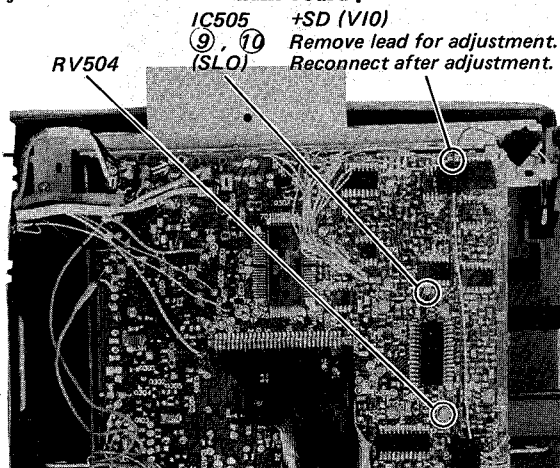
(If the top panel is left open, natural light will enter through the FOP objective lens, and adjustment will not be correct.)

Adjustment Procedure:



1. Remove the sled motor +SD lead. (In this adjustment, DC voltage is applied to the tracking amp inside IC501, so this prevents the sled motor from running at abnormal-high speed if RV504 is adjusted too far to the + or - side.)
2. Connect the oscilloscope to main board IC505 pin ⑩ (SLO).
3. Put the set into service mode (see page 10-14).
4. Press the MODE button (tracking and sled go ON).
5. Press the ►■■ key. (focus goes on).
(This should be made after step 4.)
6. Adjust RV504 so that the oscilloscope reading is 0 ± 0.05 V.
7. Press the ■ key.
Confirm that focus search operation stops. If not, press the ■ key again, longer.
8. After adjustment, release service mode (see page 10-14).
9. Reconnect the sled motor lead removed in step 1.

Adjustment Location: main board.

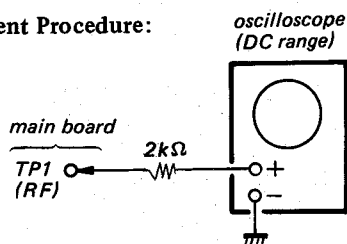


FOCUS BIAS ADJUSTMENT

Conditions

The set should be placed either vertically or horizontally.

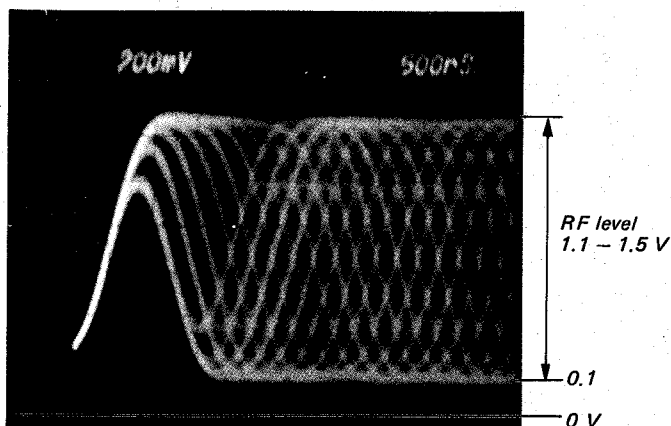
Adjustment Procedure:



1. Put the set into service mode (see pages10-14).
2. Connect the oscilloscope to main board test point TP1 (RF) through a $2k\Omega$ resistor.
3. Press the $\blacktriangleright\blacktriangleright$ and $\blacktriangleleft\blacktriangleleft$ keys to move the FOP to the center. (Move the FOP to the music area on the disc to enable easy visibility of the eye pattern).
4. Put the disc (YEDS-1) on and close the top panel.
5. Press the $\blacktriangleright\blacksquare$ key.
(It will go from focus search to focus ON, and CLV pull-in mode state. Tracking and sled are OFF).
6. Press the MODE button. (Tracking and sled go ON).
7. Adjust RV2 so that the oscilloscope waveform eye pattern is good. A good eye pattern means that the diamond shape (◊) in the center of the waveform can be clearly distinguished.

● RF Signal Reference Waveform (eye pattern)

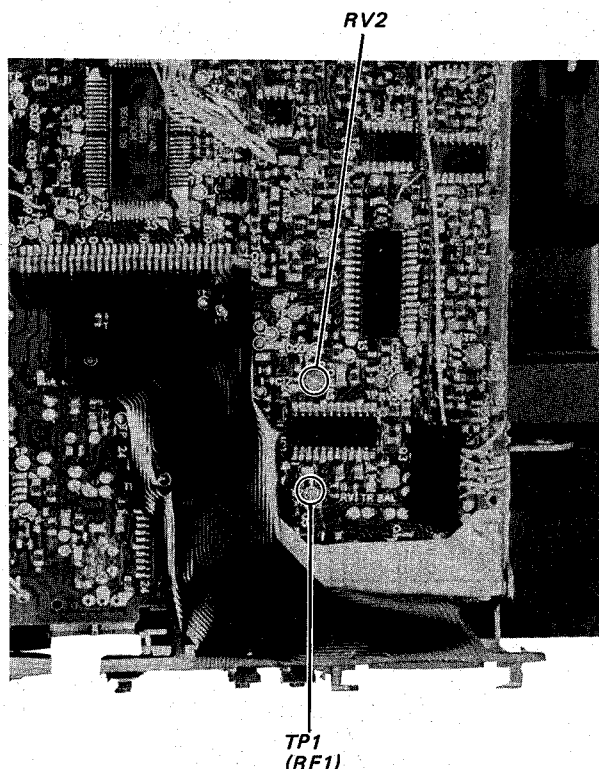
VOLT/DIV: 200 mV
TIME/DIV: 500 nS



When observing the eye pattern, set the oscilloscope for AC range and raise vertical sensitivity.

8. Press the $\blacksquare$ key. Confirm that disc rotation stops. If not, press the $\blacksquare$ key again, longer.
9. After adjustment, release service mode (see page10-12).

Adjustment Location : main board



FOCUS/TRACKING GAIN ADJUSTMENT

Focus/tracking gain determines the pick-up trackability (vertical and horizontal) relative to mechanical noise and mechanical shock when the 2-axis device operates.

However, as these reciprocate, the adjustment is at the point where both are satisfied.

- When gain is high, the noise when the 2-axis device operates increases.
- When gain is low, it is more susceptible to mechanical shock and skipping occurs more easily.

This adjustment is to be performed when the following parts are replaced.

FOP, RV501 (focus gain control), RV502 (tracking gain control).

Adjustment Method:

– Focus Gain Adjustment –

This adjustment is not to be performed.

If the focus gain control RV501 is turned, set it to mechanical center (see Fig. 6).

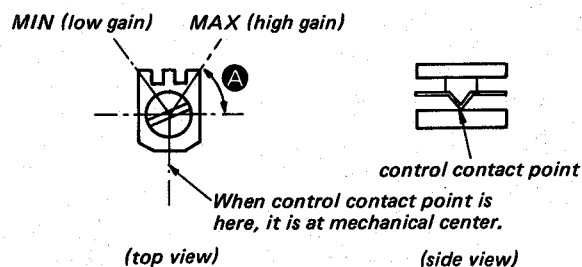
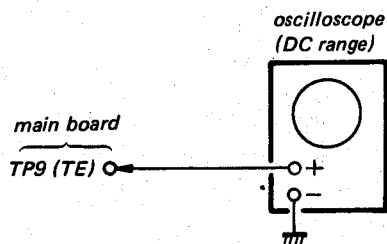


Fig. 6 Mechanical Center (seen from chip mounted side)

– Tracking Gain Adjustment – (perform at normal operation)



1. Place the set level, horizontally (upper panel can be facing down). If the set is not level, the 2-axis device will be weighted and adjustment cannot be done.
2. Connect the oscilloscope to main board test point TP9 (TE).

3. Turn the power switch on, put the disc on (YEDS-1) and press the ► key.
4. Turn RV502 slightly clockwise (tracking gain drops) and obtain a waveform with a fundamental wave (waveform has large waves) as in Figure 7.
5. Turn RV502 slowly counterclockwise (tracking gain rises) until the fundamental wave disappears (no large waves) as in Figure 8.
6. Set RV502 to the position about 30° counterclockwise from the position obtained in step 5. If RV502 contact point location is within the range shown in Figure 6 A, tracking gain is too high. In this case, readjust from step 4.
7. Select AMS mode with the MODE button, continuously press ► or ◀ key and observe the 100 track jump waveform. Check that no traverse waveform appears for both ► and ◀ directions. (See Figures 9 and 10.) It is acceptable if the traverse waveform appears only now and then, but if it appears constantly, raise tracking gain slightly and check step 7 again.
8. Check that there is not an abnormal amount of operation noise (white noise) from the 2-axis device. If there is, tracking gain is too high, so readjust starting with step 4.

The waveforms are those measured with the oscilloscope set as shown below.

VOLT/DIV: 1 V

TIME/DIV: 5 mV

- Waveform when tracking gain is lowered. Fundamental wave appears (large waves).

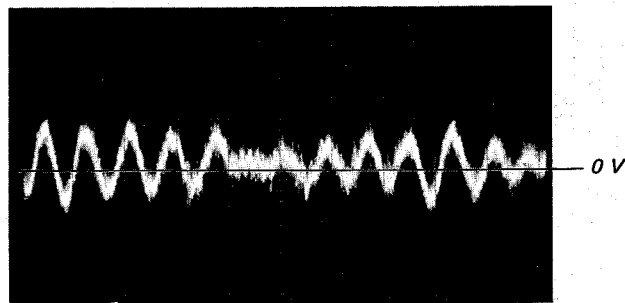


Fig. 7

- Waveform when fundamental wave disappears (no large waves).

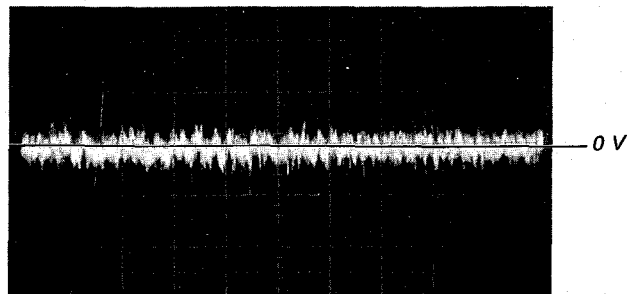


Fig. 8

- Waveform with no traverse waveform during 100 track jump. (Brake operation is smooth and good because of best adjustment).

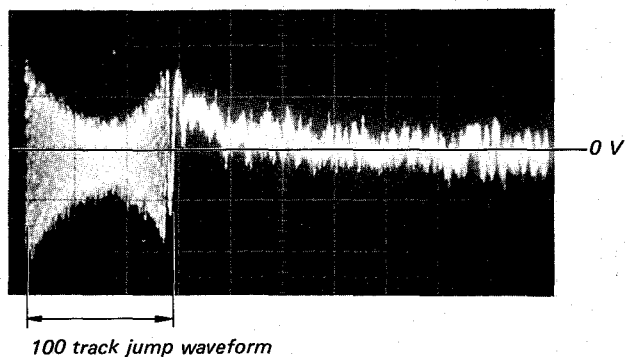


Fig. 9

- Waveform with traverse waveform during 100 track jump. (Brake operation is poor because of low tracking gain.)

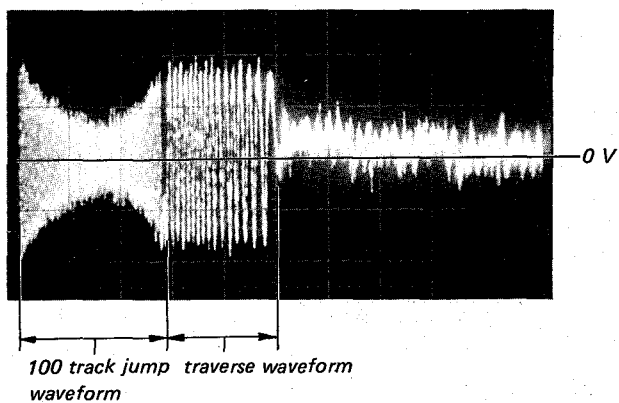
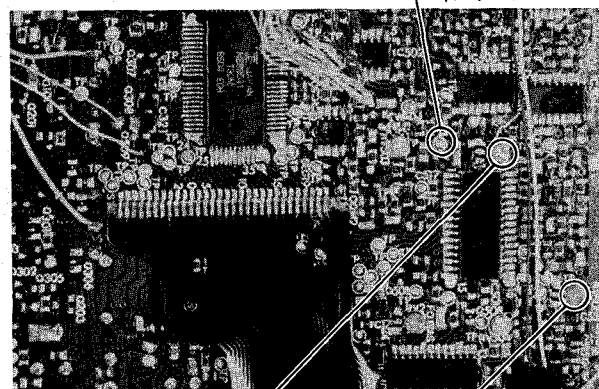
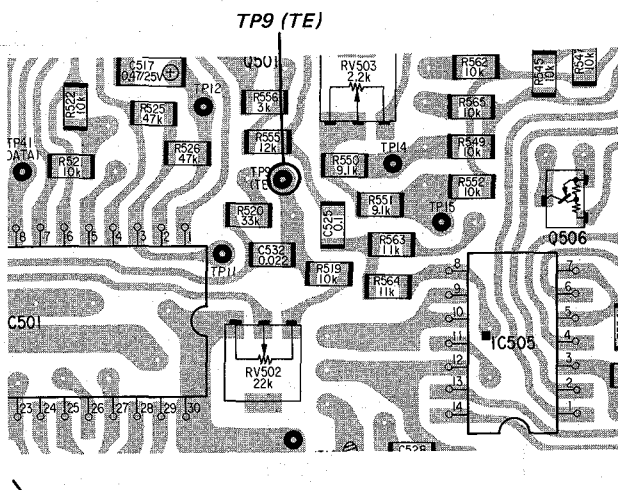


Fig. 10

Adjustment Location: main board

RV502
(tracking gain)RV501
(focus gain)

● Semiconductor Lead Layouts

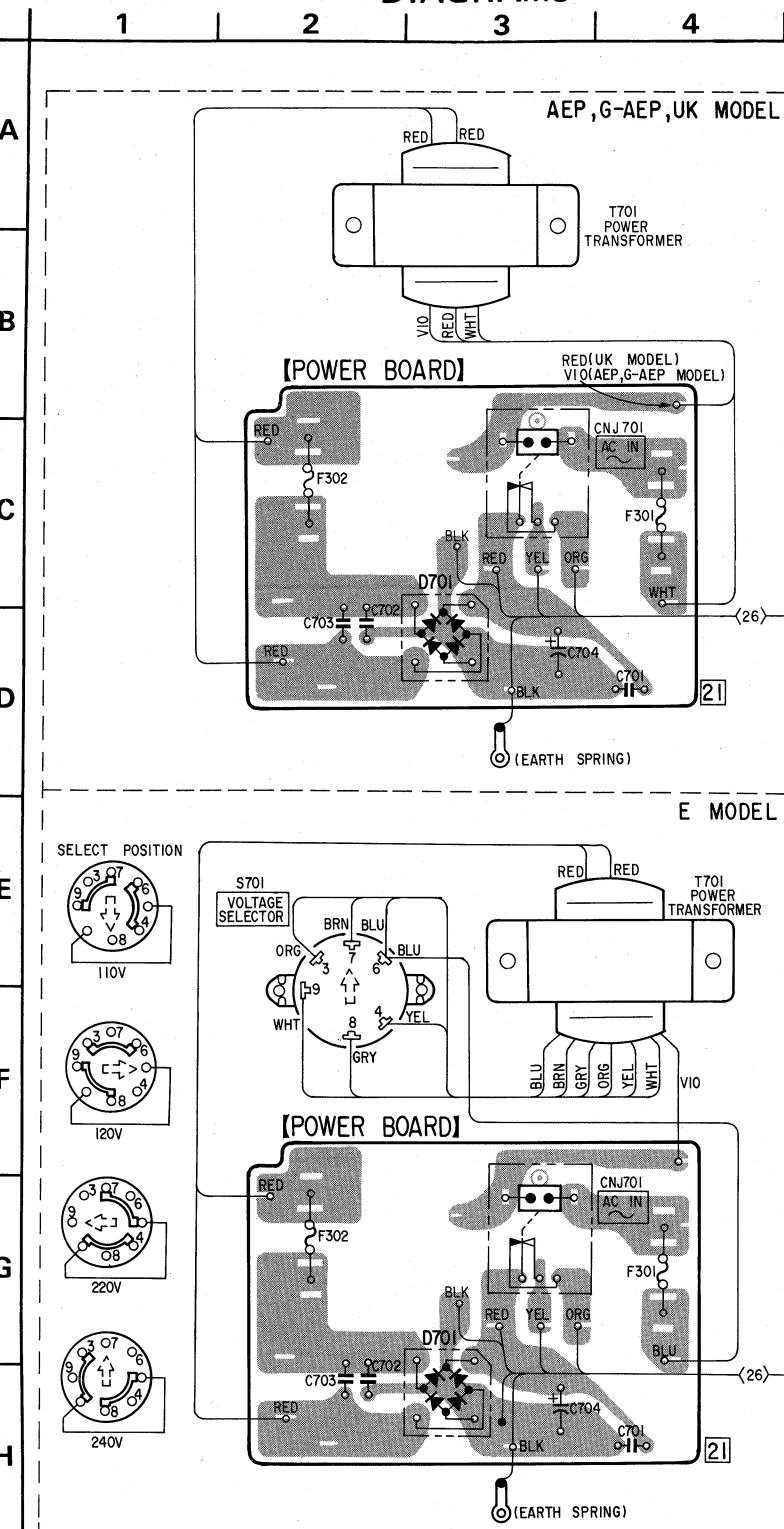
LA2010 LA3161 TA7343AP cut or dot 1 2 n	SLP153B-40 SLP253B-40 anode cathode	PH103-L E C
HA12047 TC9310N-049 LA1260S LA4126T line or slit or dot 1 2 n n+1 (Top view)	2SC2724-C 2SC2839-E 2SC2840-DL 2SC2603-F 2SC2458L-BL 2SB808-G1 2SA1048-GR B C E	2SK 193-E letter side G S D
1S2687S-1 1SS133 SD113 1SS119 1SS106 RD5.1EB1 RD8.2EB2 HZ2ALL RD12EB2T HZ3.0EB1T2 cathode anode	2SD880-GR B C E	TLR213 anode cathode
SLP135B SLP235B SLP435B long short anode cathode	2SD773-4 E C B	2SC3064-F E C B B
S2VB60Z long short anode cathode	2SK184-BL S G D	LT-9200N 1 2 3 4
GP-2S04-B E C B	2SC2785-E letter side E C B	2SD1273-P B C E

SECTION 4 DIAGRAMS

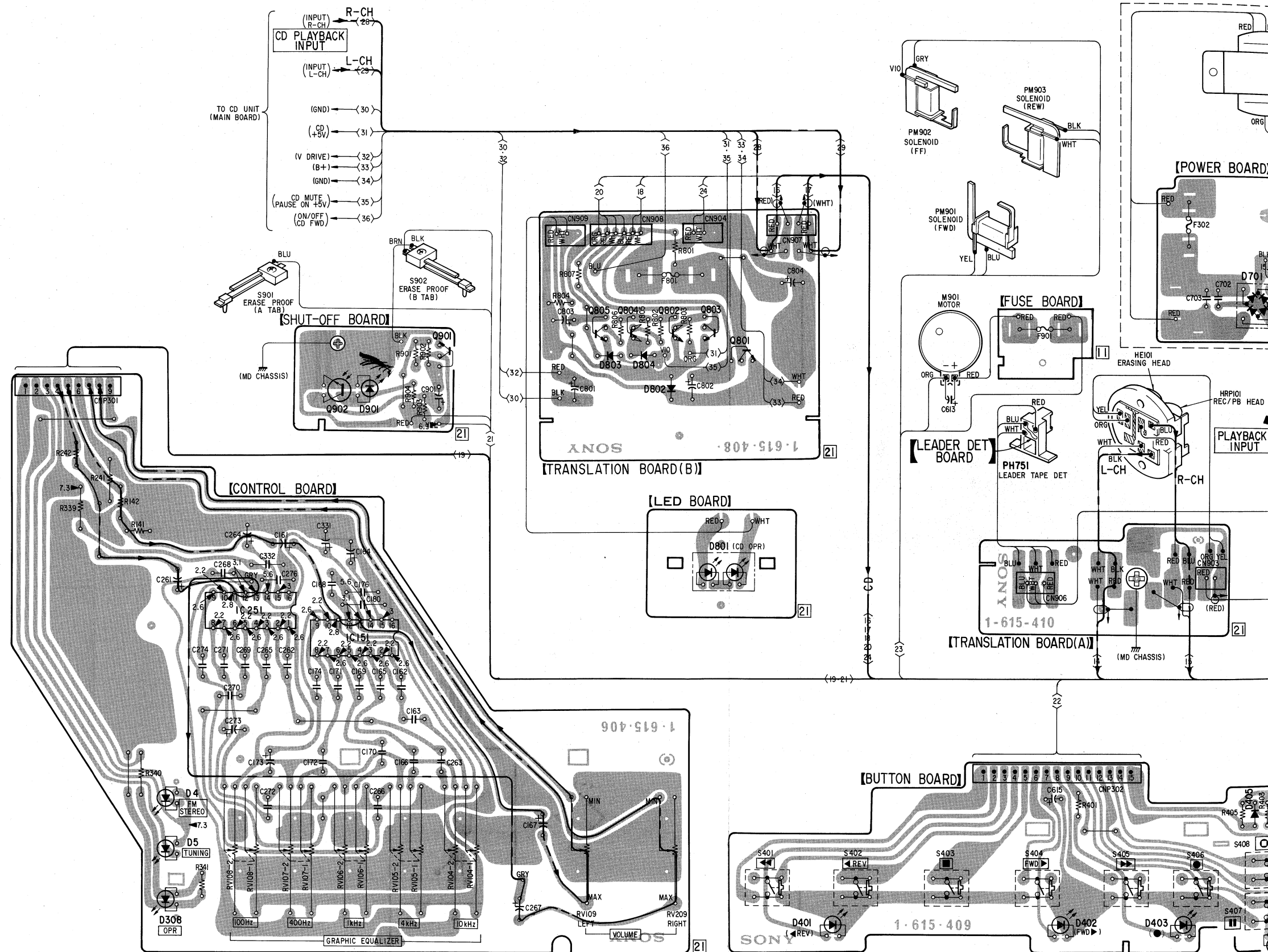
4-1. MOUNTING DIAGRAM (1) — Radio and Cassette-Recorder Section — — Conductor Side —

• See page 62 for Semiconductor Lead Layouts.

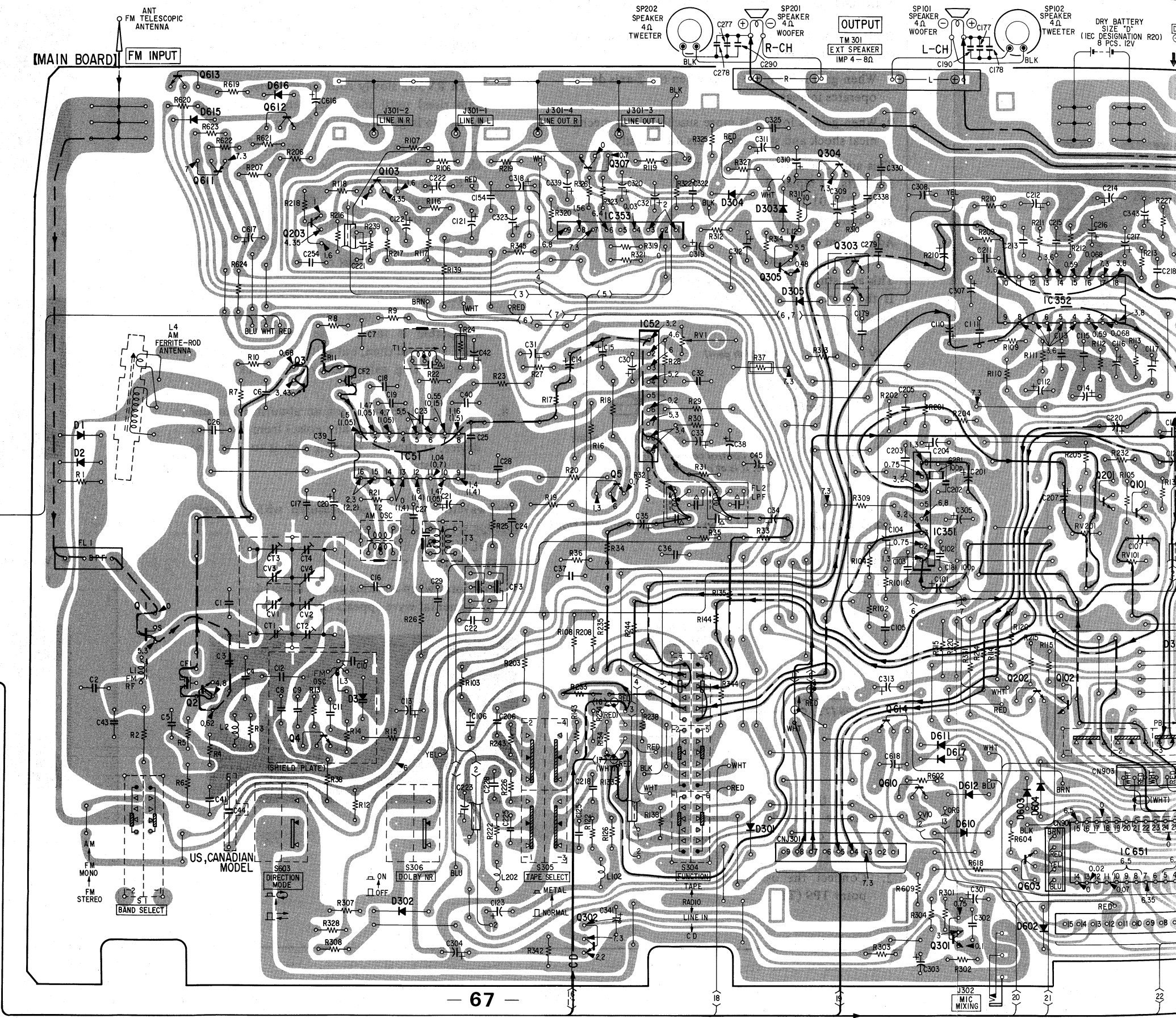
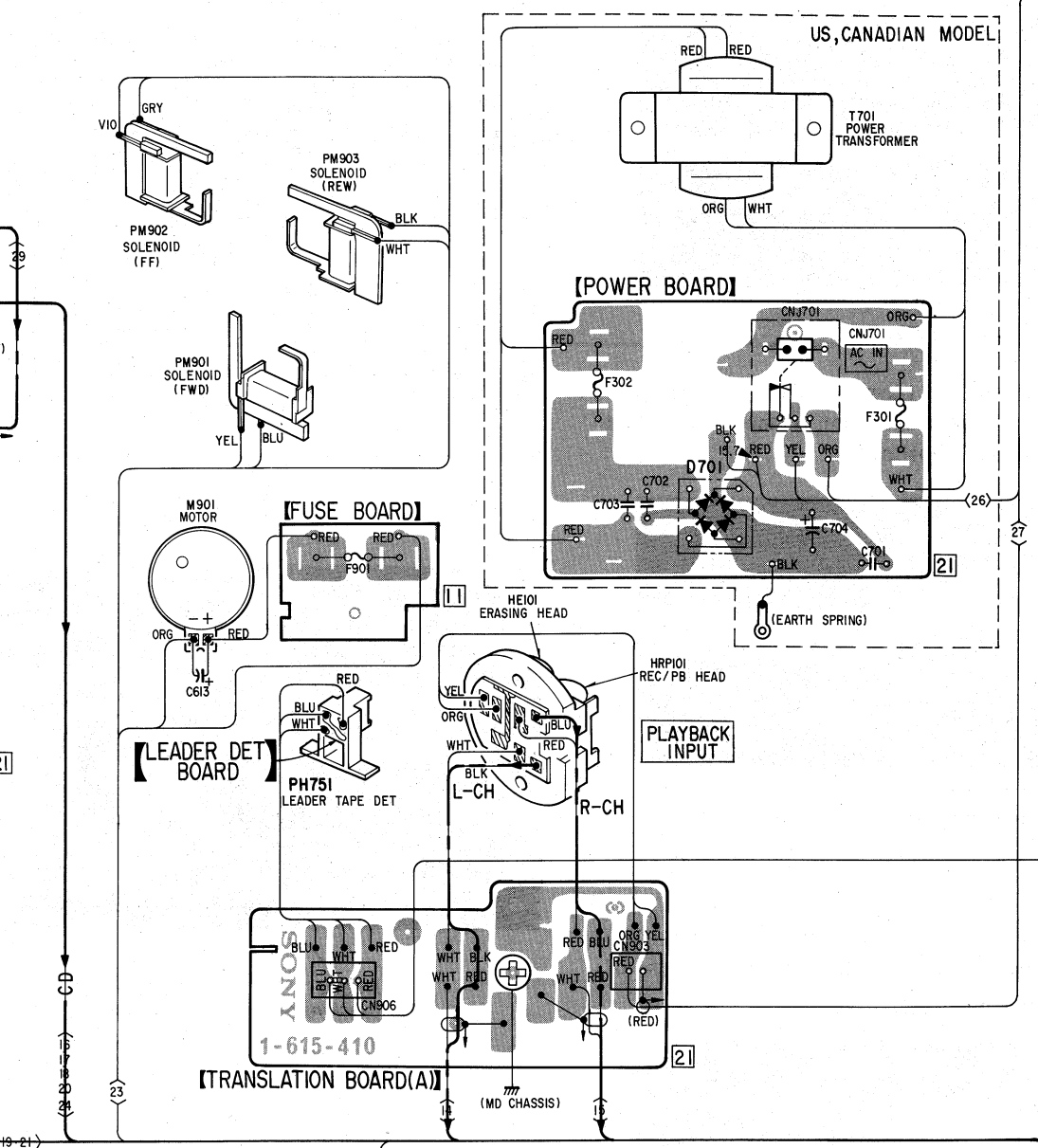
Q	IC	902	IC151	901	805	804	802	803	801	PH751	701	402	403	405
D		4 5 308	901		803	804	802	801		401				

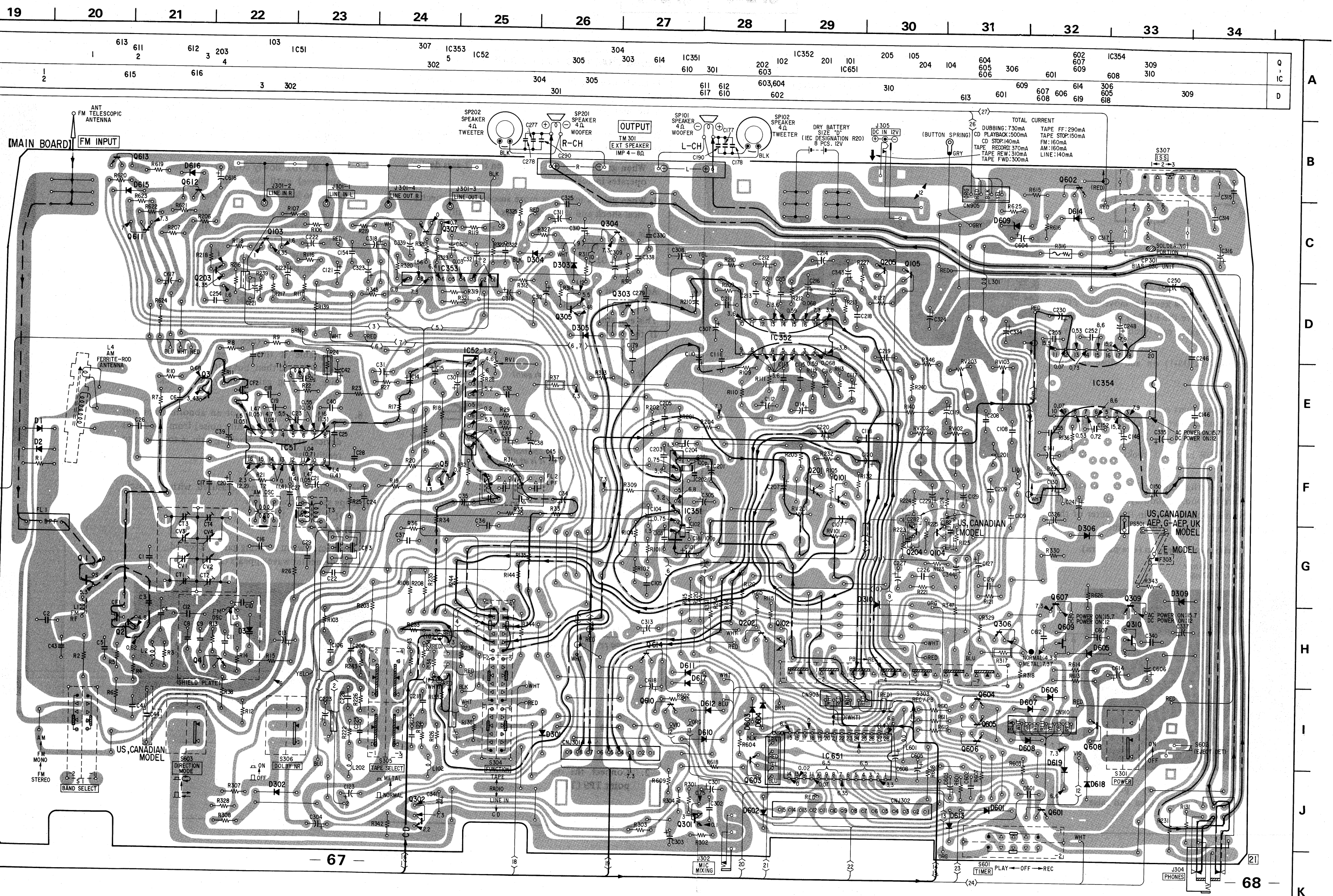


- Note:**
- Color code of sleeving over the end of the jacket.
 - WHT, RED, (RED)(GRY) — signal path
 - : parts extracted from the component side.
 - : parts extracted from the conductor side.
 - : part mounted on the conductor side.
 - : indicates side identified with part number.
 - : signal path
 - : L-CH signal path
 - : R-CH signal path

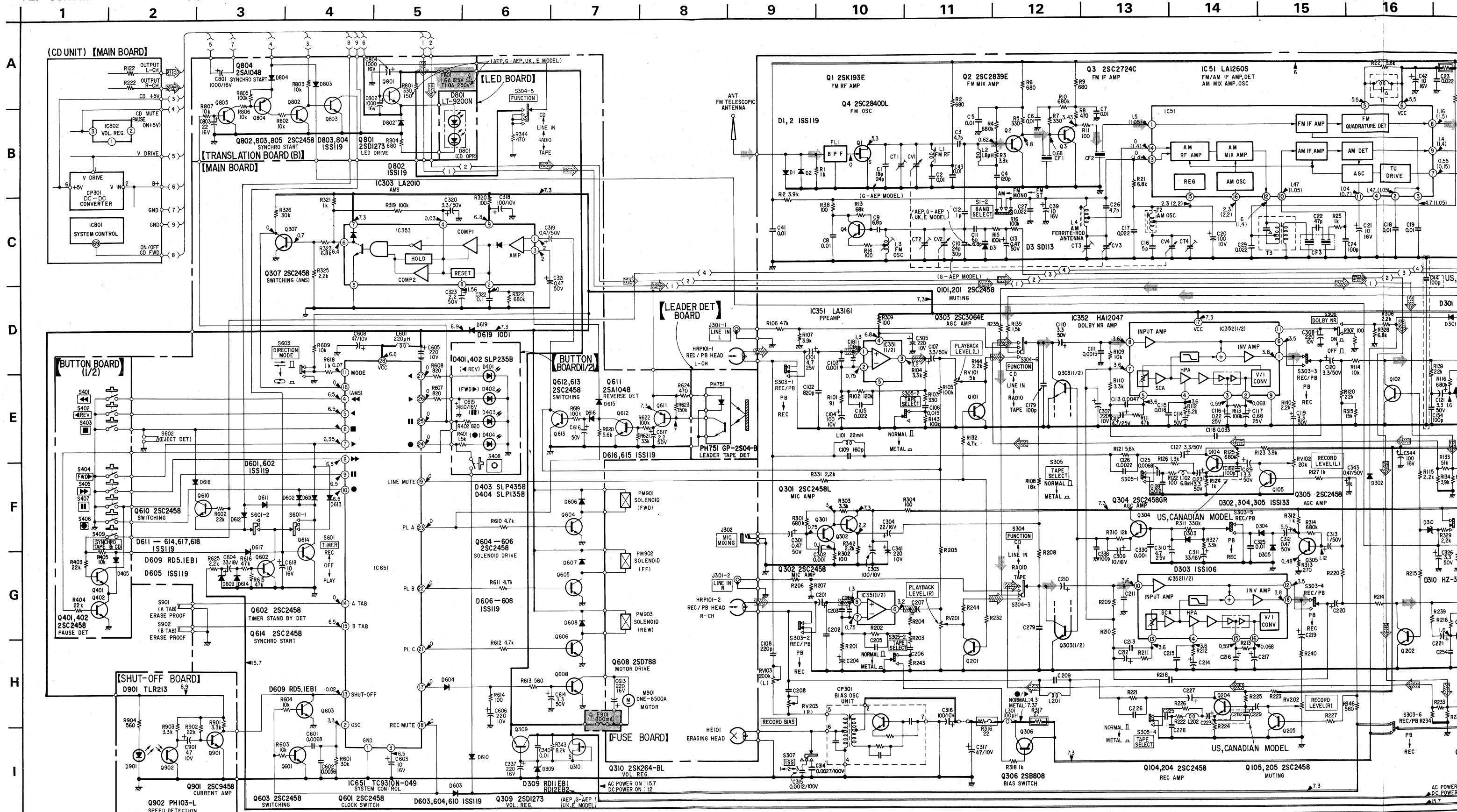


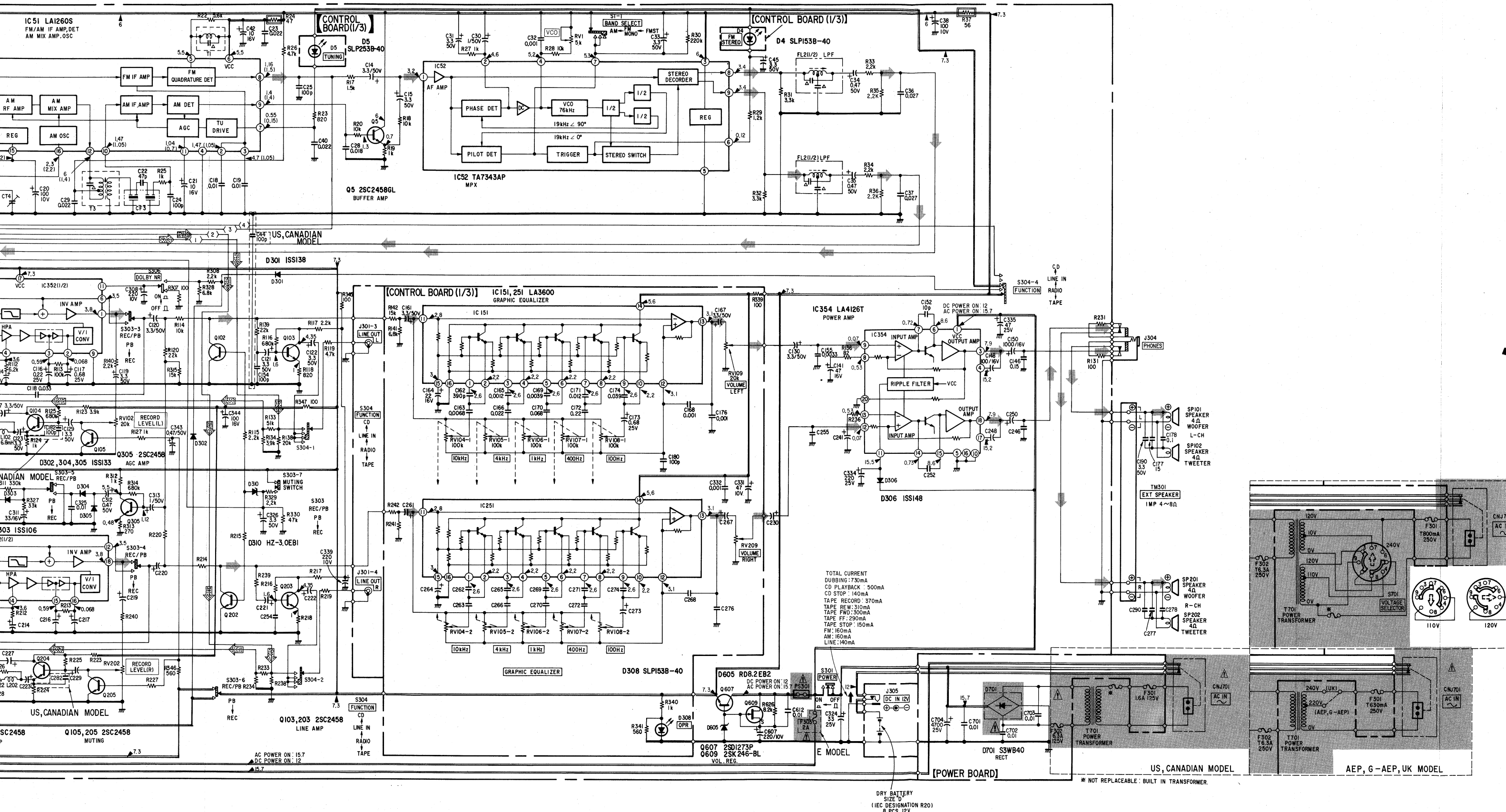
PH751 401 402 701 405 404 613 611 2 612 3 203 4 103 IC51 307 IC353 5 IC52 304 303 614 IC351 610 301 202 102 IC352 201 101 IC651 402 403 2 615 616 3 302 304 305 301 305 611 612 610 603,604 602



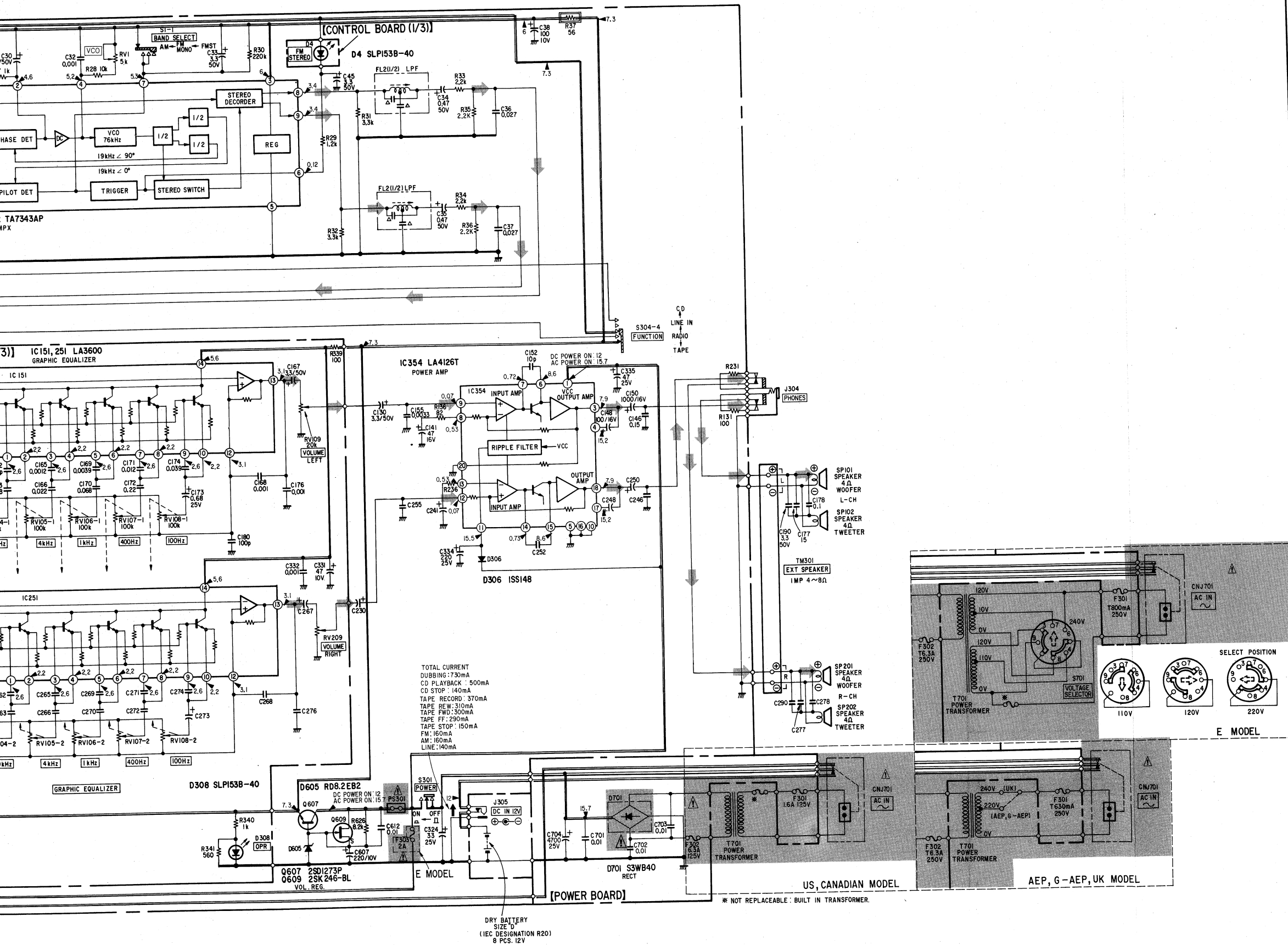


4-2. SCHEMATIC DIAGRAM (1) – Radio and Cassette-Recorder Section –





19 20 21 22 23 24 25 26 27 28 29 30 31



Note:

- All capacitors are in μF unless otherwise noted. pF: μpF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}\text{W}$ or less unless otherwise specified.
- FM signal path
- CD signal path
- Deck signal path

Note: The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

Note: Les composants identifiés par une trame et une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- Components for right channel have same values as for left channel. Reference numbers are coded from 200.
- Δ : internal component.
- nonflammable resistor.
- fusible resistor.
- Switch with sliding contact indicated by hatched lines shows shorting type.

Switch

Ref. No.	Switch	Position
S1	BAND SELECT	FM ST
S301	POWER	OFF
S303	REC/PB	PB
S304	FUNCTION	RADIO
S305	TAPE SELECT	NORMAL
S306	DOLBY NR	OFF
S307	ISS	2
S401	◀◀	OFF
S402	◀REV	OFF
S403	■	OFF
S404	FWD▶	OFF
S405	▶▶	OFF
S406	●	OFF
S407		OFF
S408	○	OFF
S409	SYNCHRO TAPE & DC	OFF
S601	TIMER	OFF
S602	EJECT DET	OFF
S603	DIRECTION MODE	OFF
S901	ACCIDENTAL ERASURE (A)	OFF
S902	ACCIDENTAL ERASURE (B)	OFF

- B+ bus.
- adjustment for repair.
- Readings are taken under no-signal (detuned) conditions with a VOM (50 k Ω /V).
- record mode

Note for schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF : μF 50WV or less are not indicated except for electrolytics
- All resistors are in ohms, $\frac{1}{4}\text{W}$ or less unless otherwise specified.
- $\square$: signal path.
- Components for right channel have same values as for left channel. Reference numbers are coded from 200.
- $\triangle$: internal component.
- 1% shows tolerance.
- --- : B+ bus.
- --- : B- bus.
- $\square$: adjustment for repair.
- Voltages, waveform and total current are measured with top panel closed.
- Power voltage is DC 9 V and fed with regulated dc power supply from main board of radio/cassette recorder.
- Voltages are DC with respect to ground in service mode.
- Voltage variations may be noted due to normal production tolerances.
- no mark: stop mode
- () : play mode
- Waveforms are taken to ground in service mode by using oscilloscope.
- Voltage variations may be noted due to normal production tolerances.
- Total current is measured in service mode.

Switch

Ref. No.	Switch	Position
S901	LASER ON	ON
S902	OPEN/CLOSE	ON
S903	LIMIT	OFF
S904	REMAIN	OFF
S905	MODE	OFF
S906	▶▶▶(PLAY/PAUSE)	OFF
S907	▶▶ (FF)	OFF
S908	◀◀ (FR)	OFF
S909	■ (STOP)	OFF

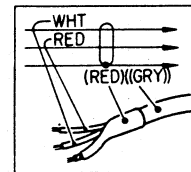
See page 10 — 14 for setup of service mode.

Note: The components identified by shading and mark $\triangle$ are critical for safety. Replace only with part number specified.

Note: Les composants identifiés par une trame et une marque $\triangle$ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Note:

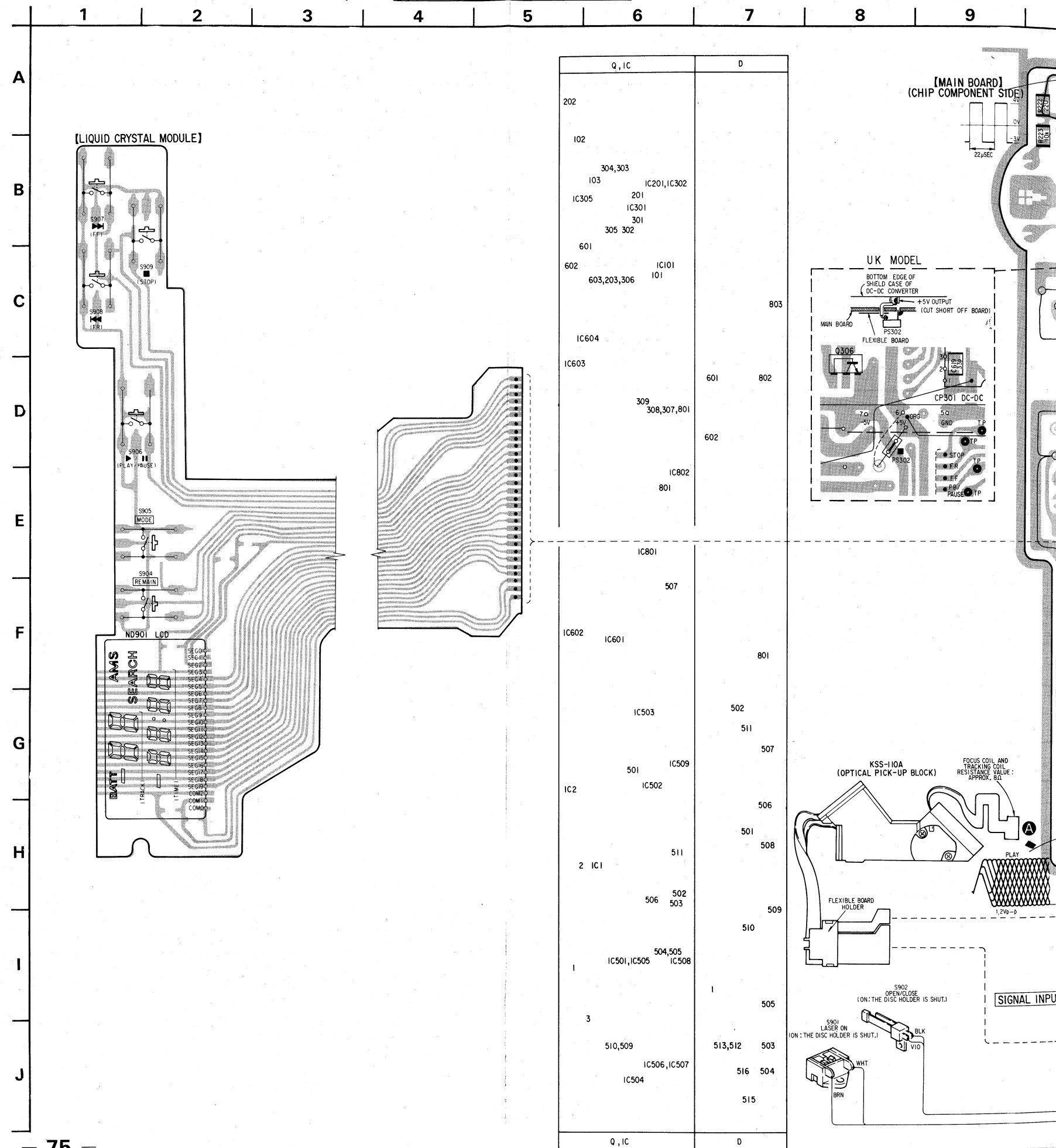
- Color code of sleeving over the end of the jacket.

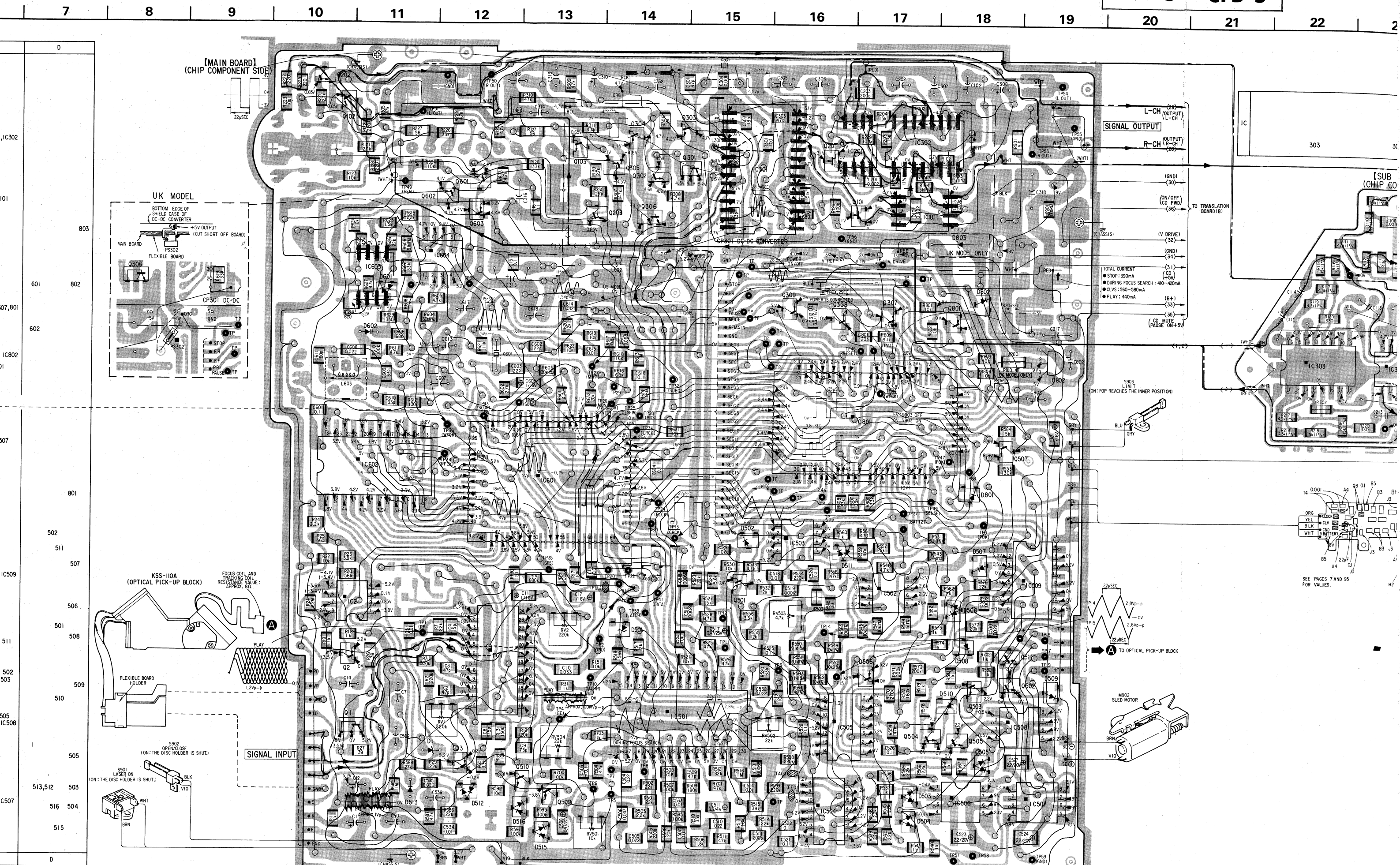


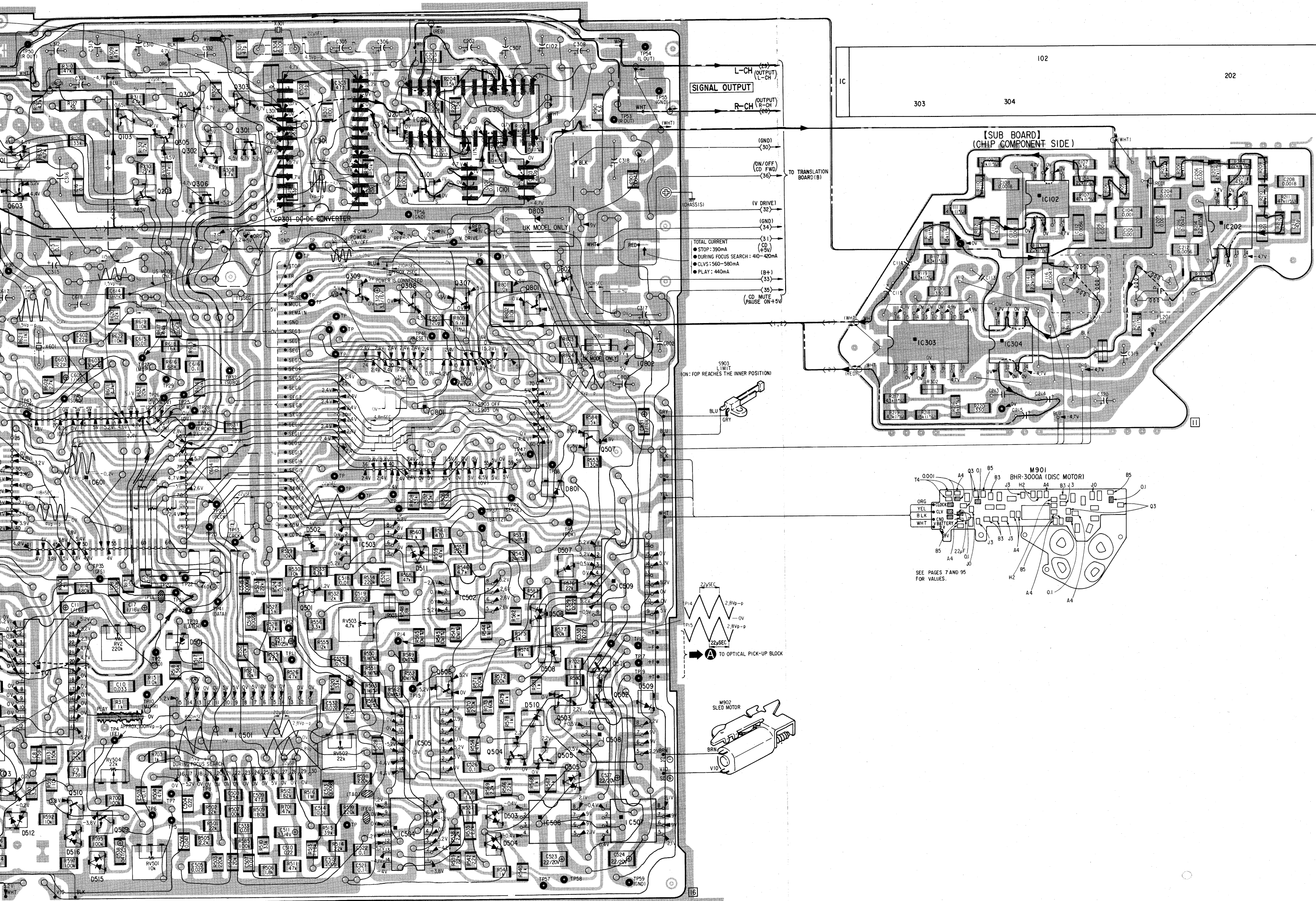
- $\circ$: parts extracted from the side where DC-DC converter unit is mounted.
- $\bullet$: parts extracted from chip component side.

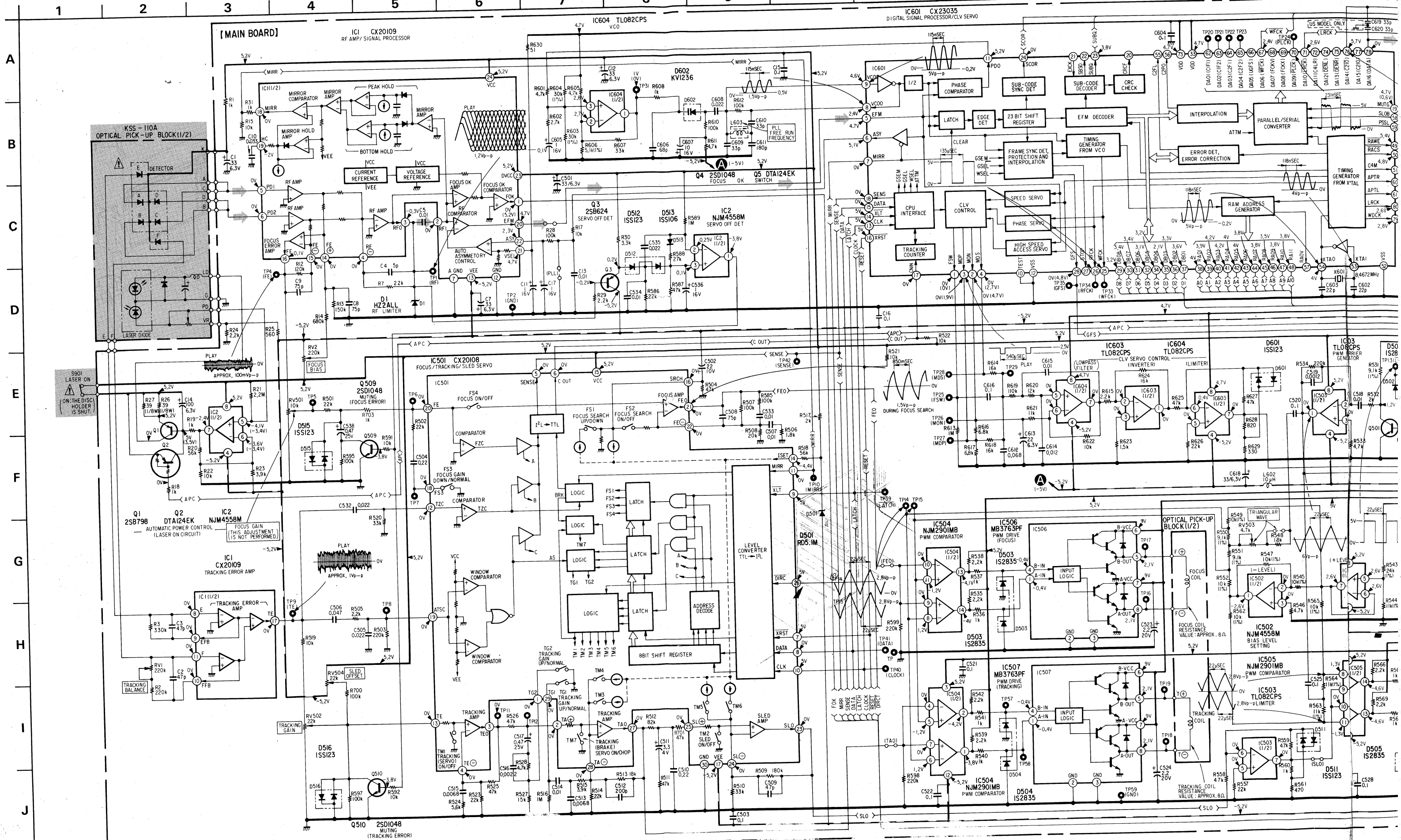
Through hole

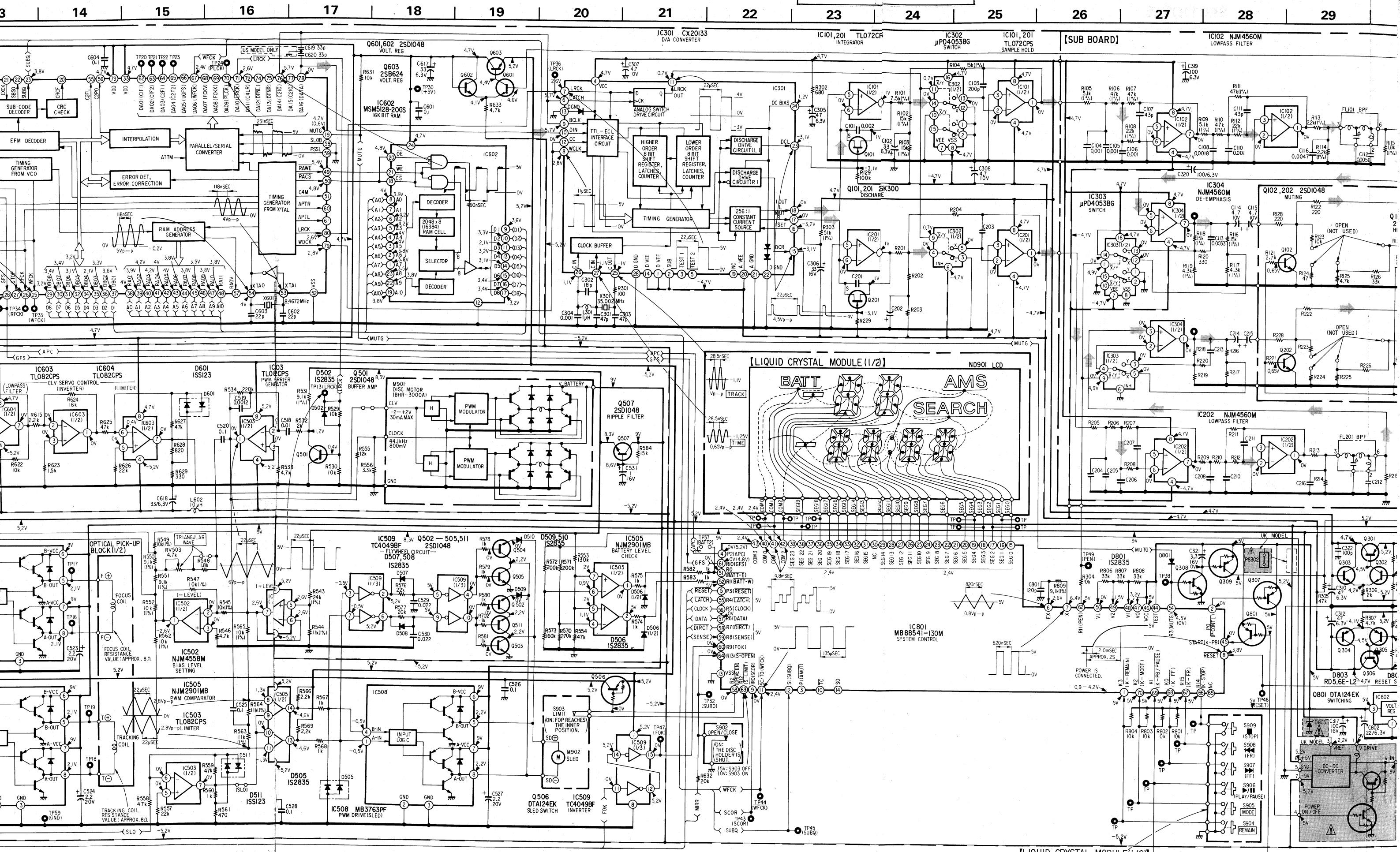
- $\circ$: conductor pattern where DC DC converter unit is mounted.
- --- : signal path
- --- : L-CH signal path
- --- : R-CH signal path

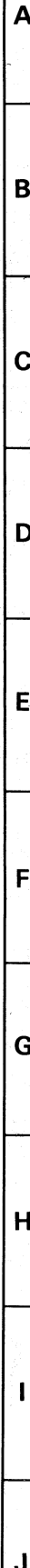












• Semiconductor Lead Layouts

2SB798
2SD999

2SB624-BV5
2SD1048X6
DTA124EK
DTC124EK

2SK300

CX20108
CX20109
CX20133
HM6116EP-3
MB3763PF
NJM2901MB
NJM4558M
NJM4560M
TC4015BF
TC4027BF
TC4030BF
TC4049BF
TL072CPS
TL082CPS
μPD4053BG

CX23035

MB88541-130M

NJM4560S

S81250HG

1S2835

1S2837

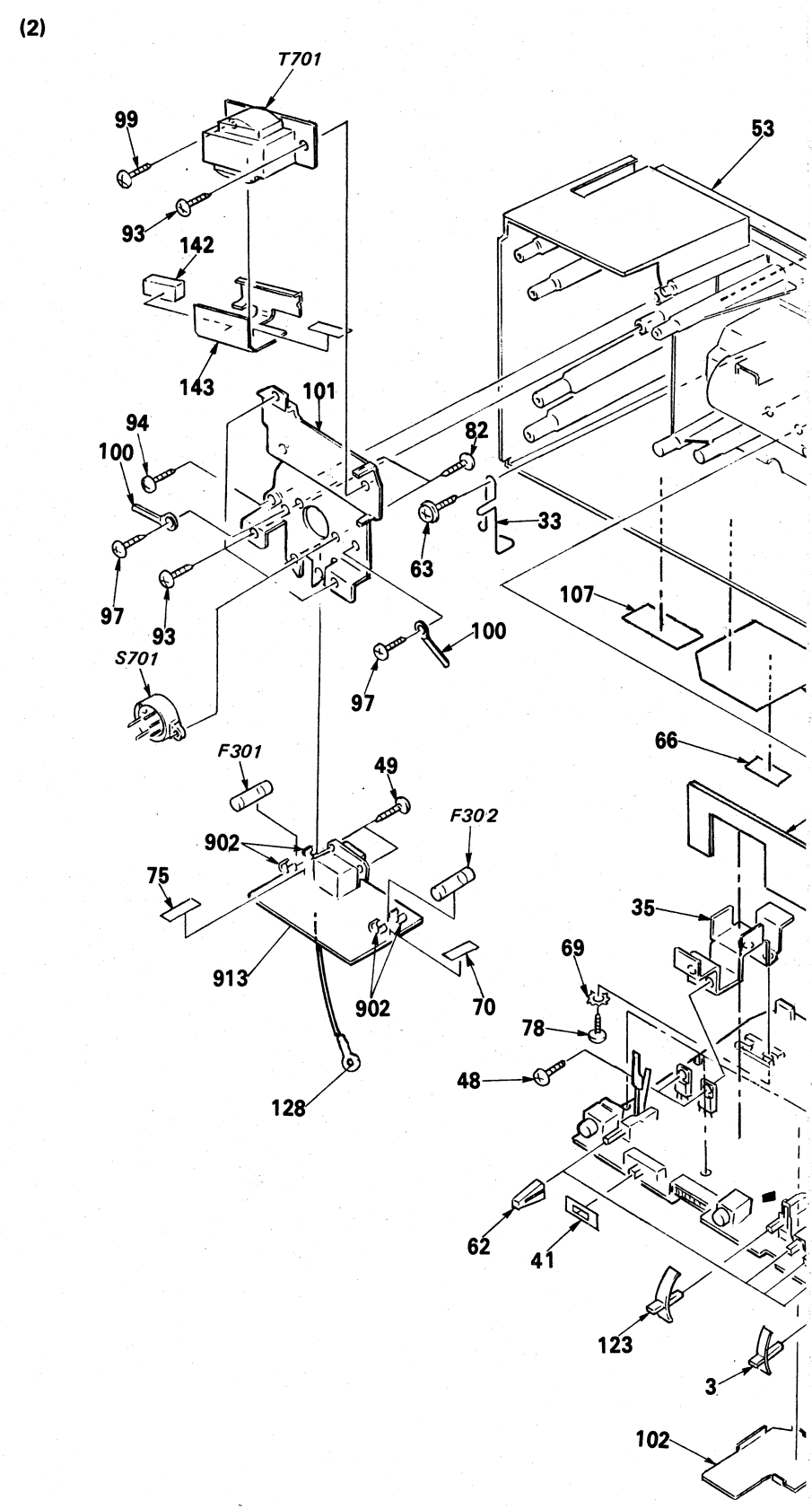
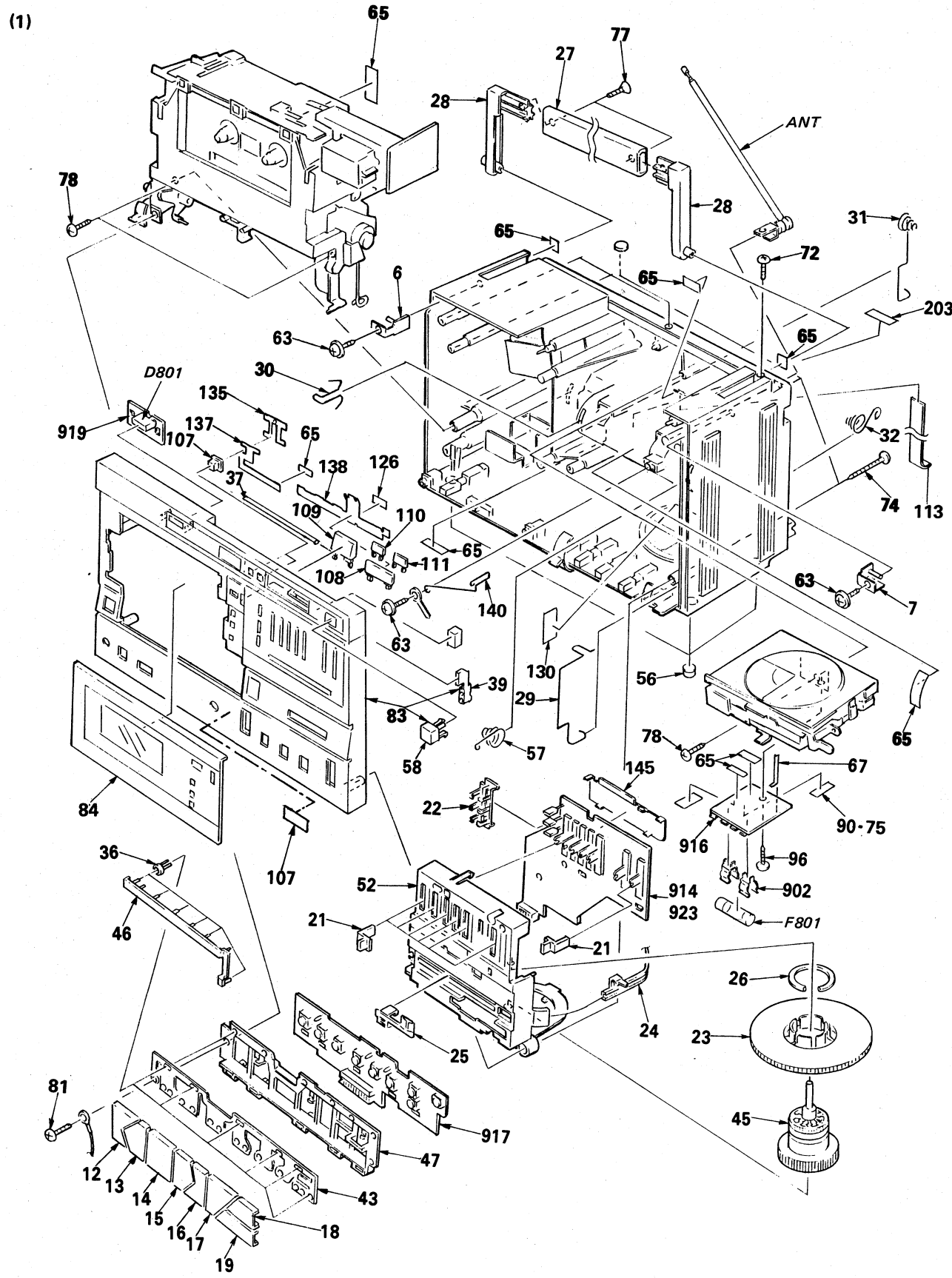
1SS106
HZ2ALL

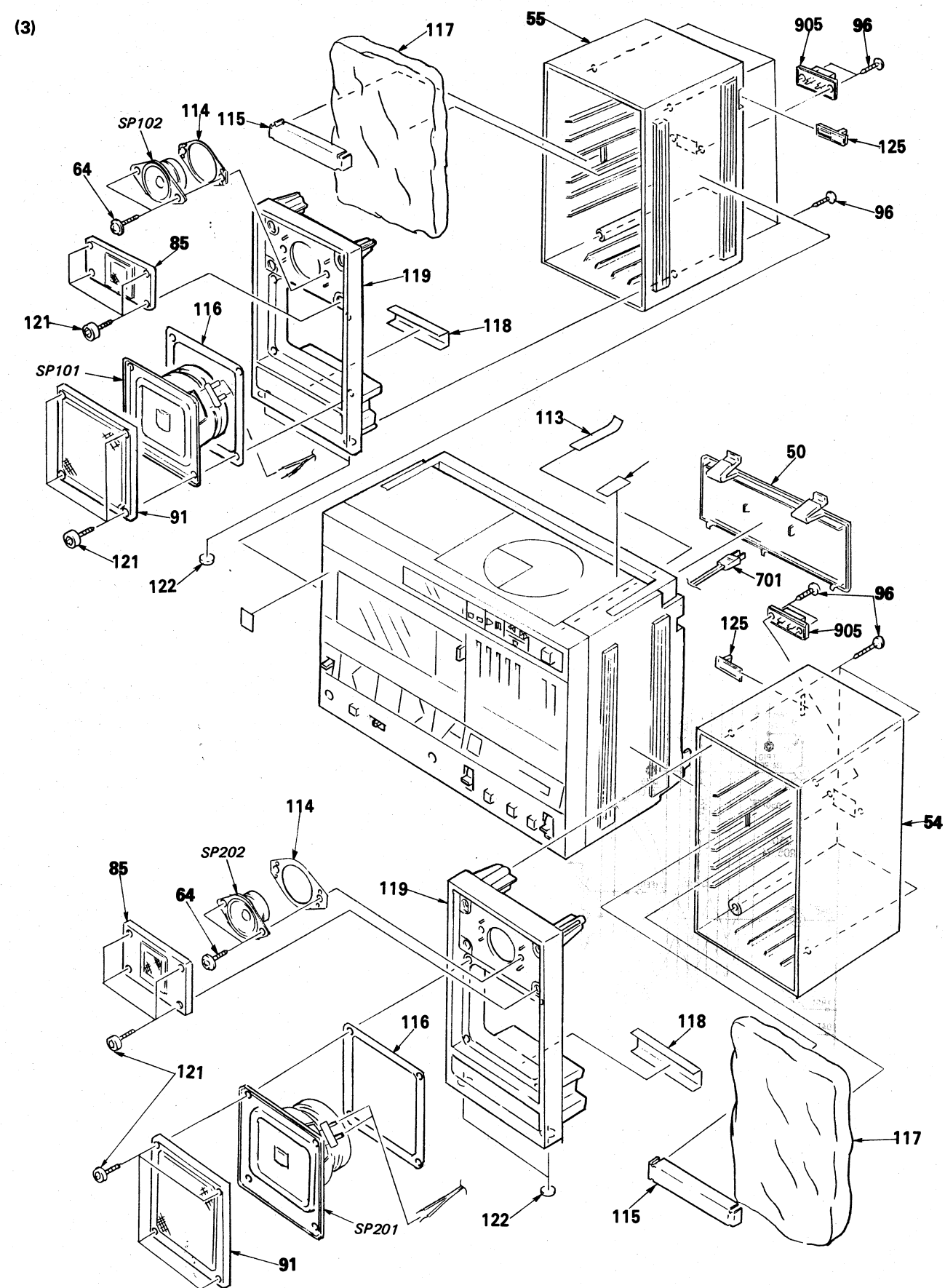
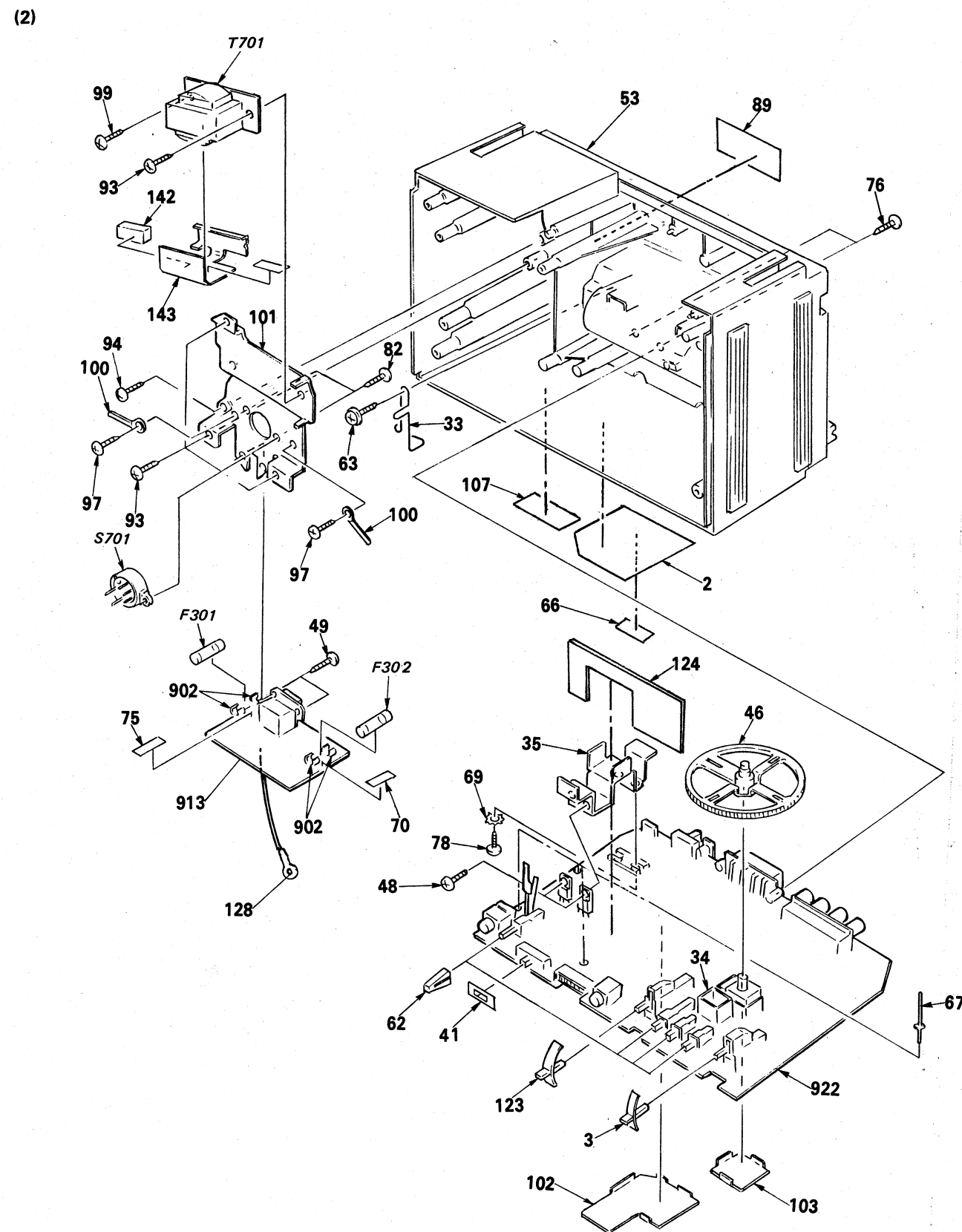
1SS123

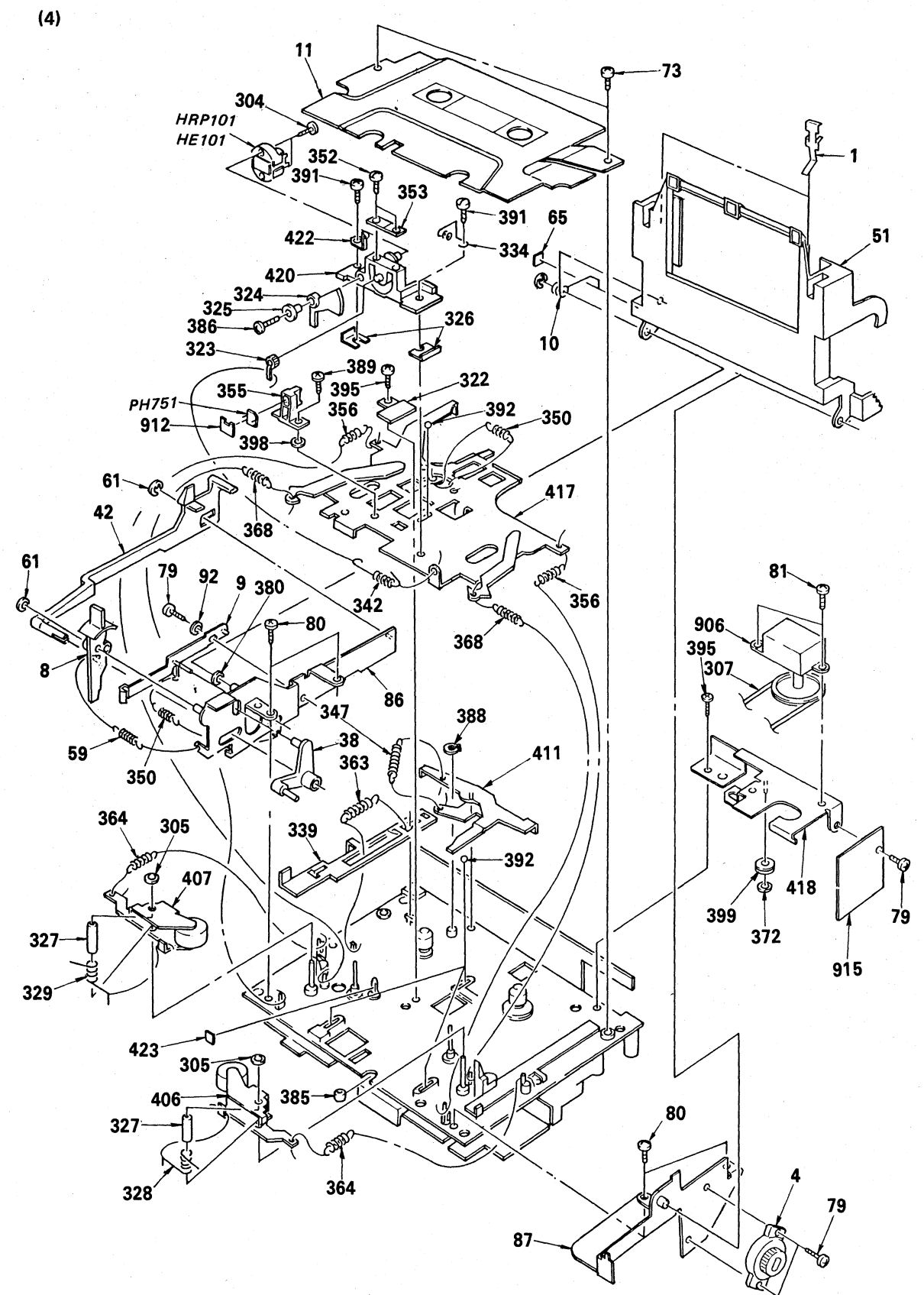
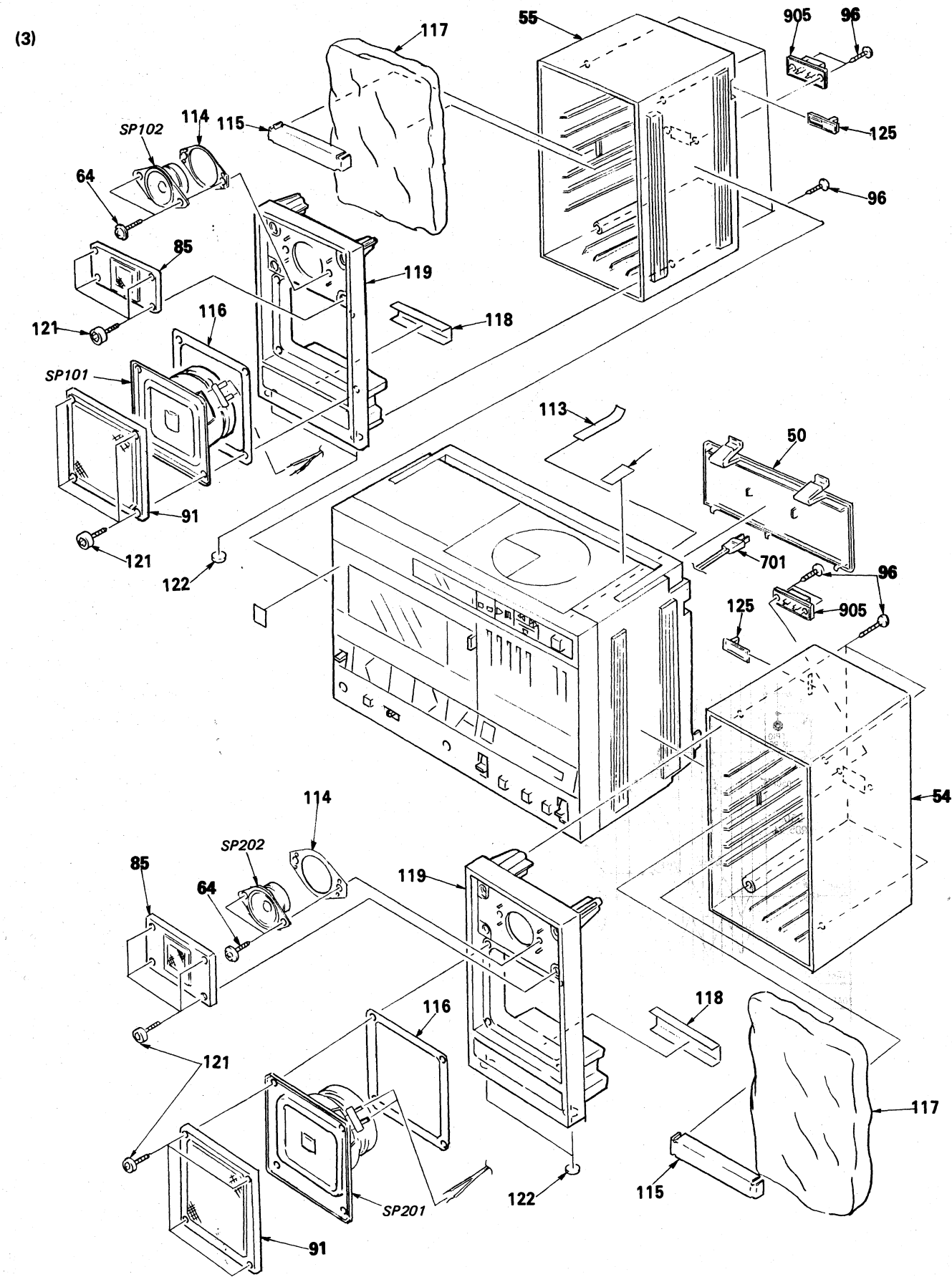
KV1236E

RD5.1M-B2

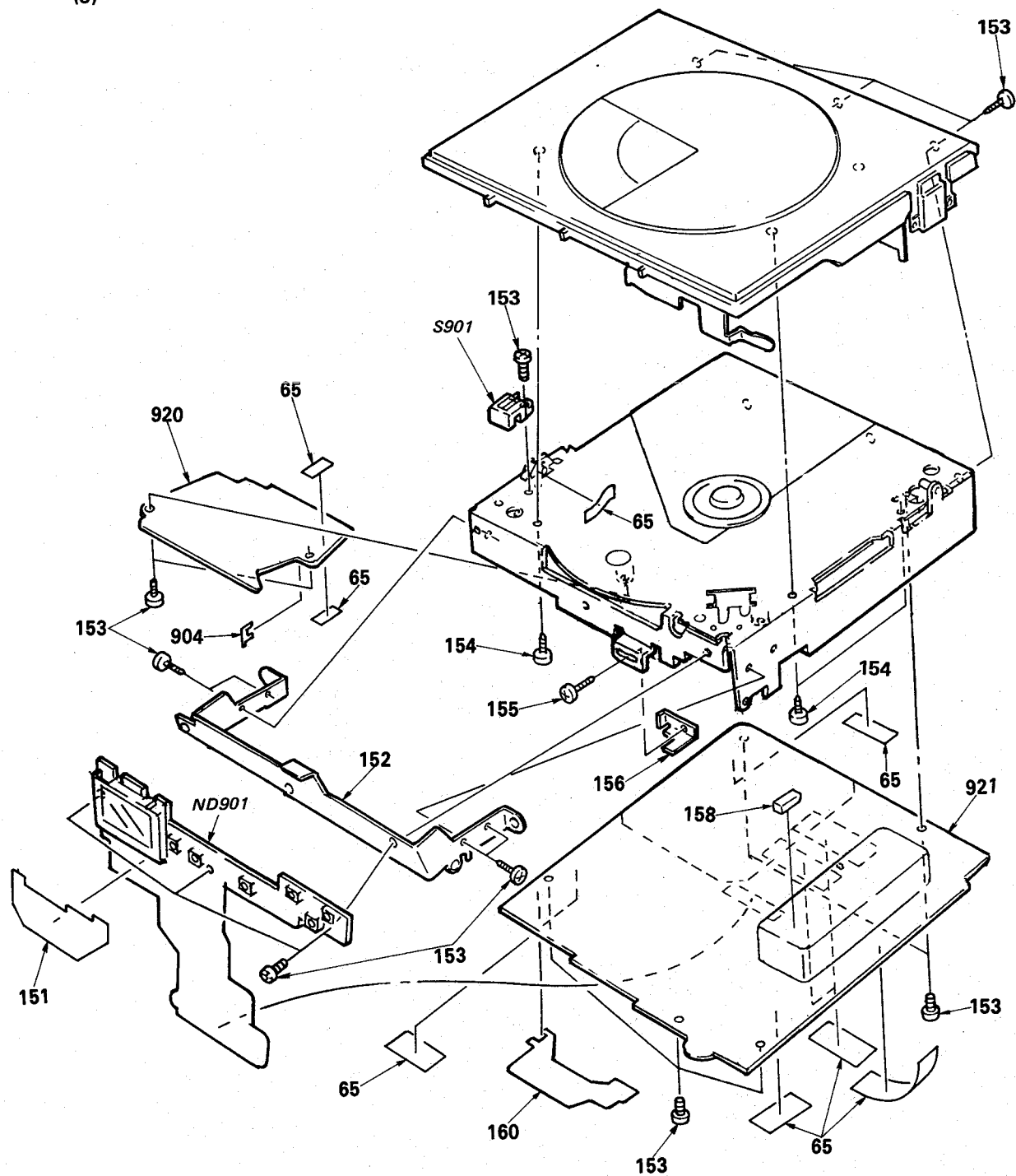
SECTION 5
EXPLODED VIEW AND PARTS LIST
• NOTE: REFER TO THE FOLLOWING PART LISTS.



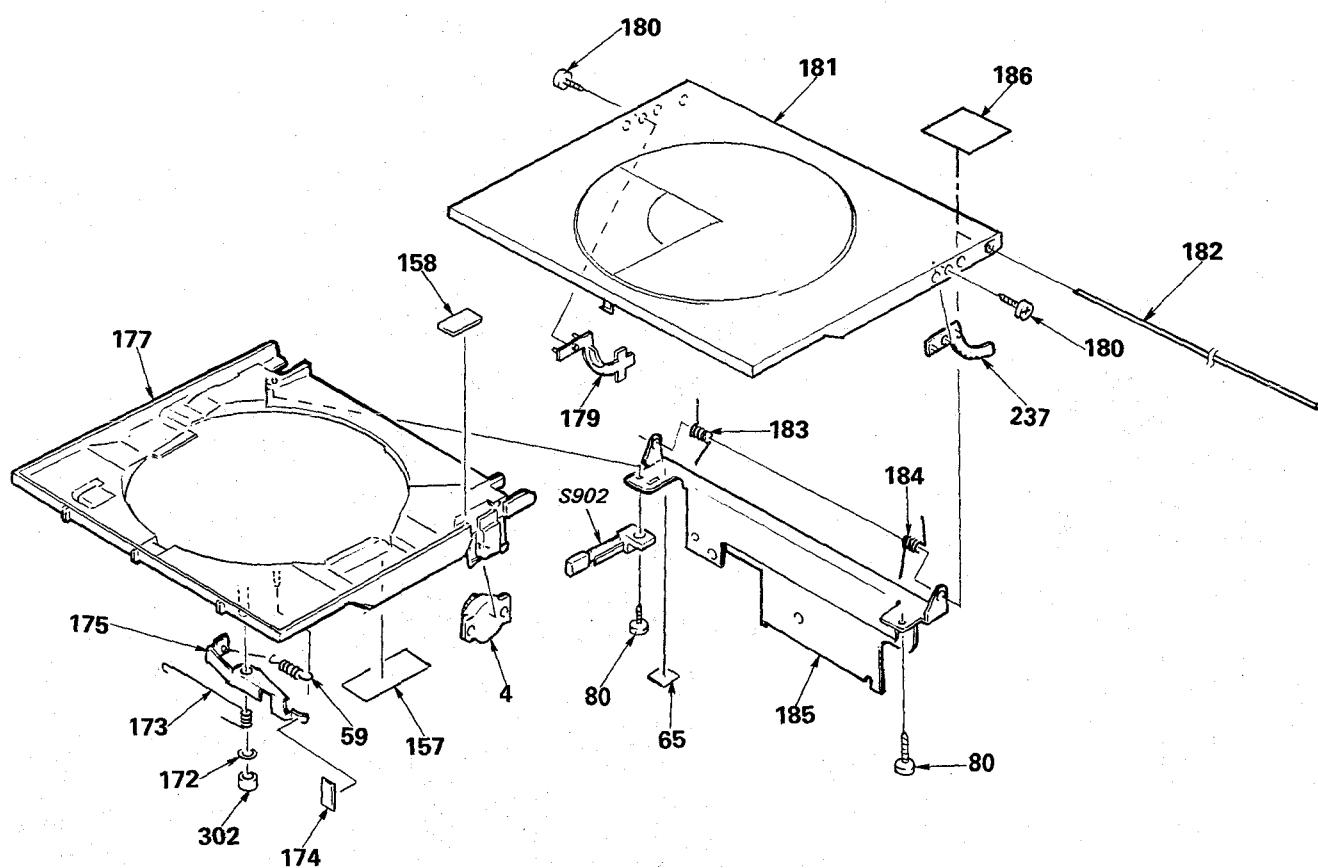




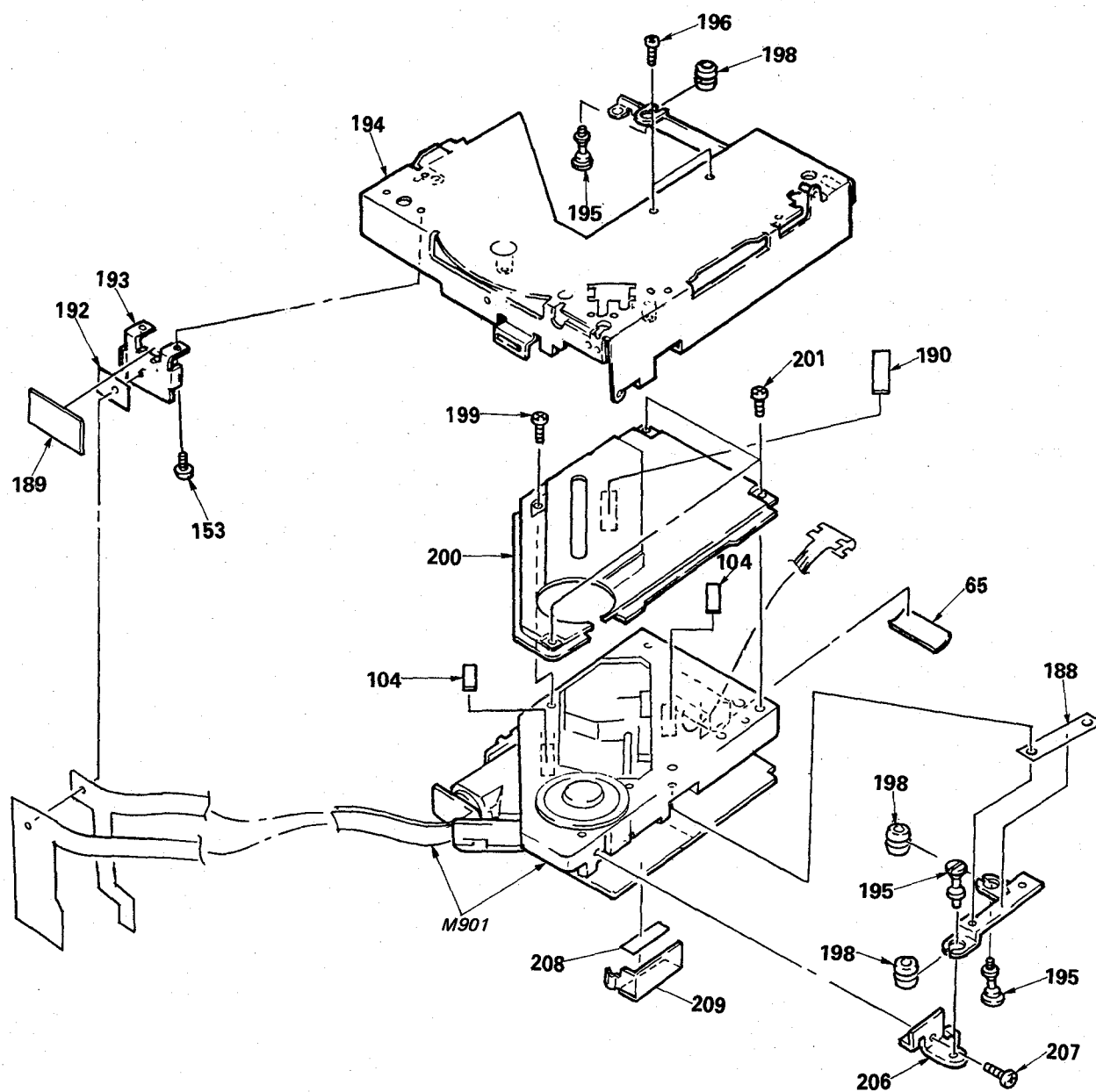
(6)



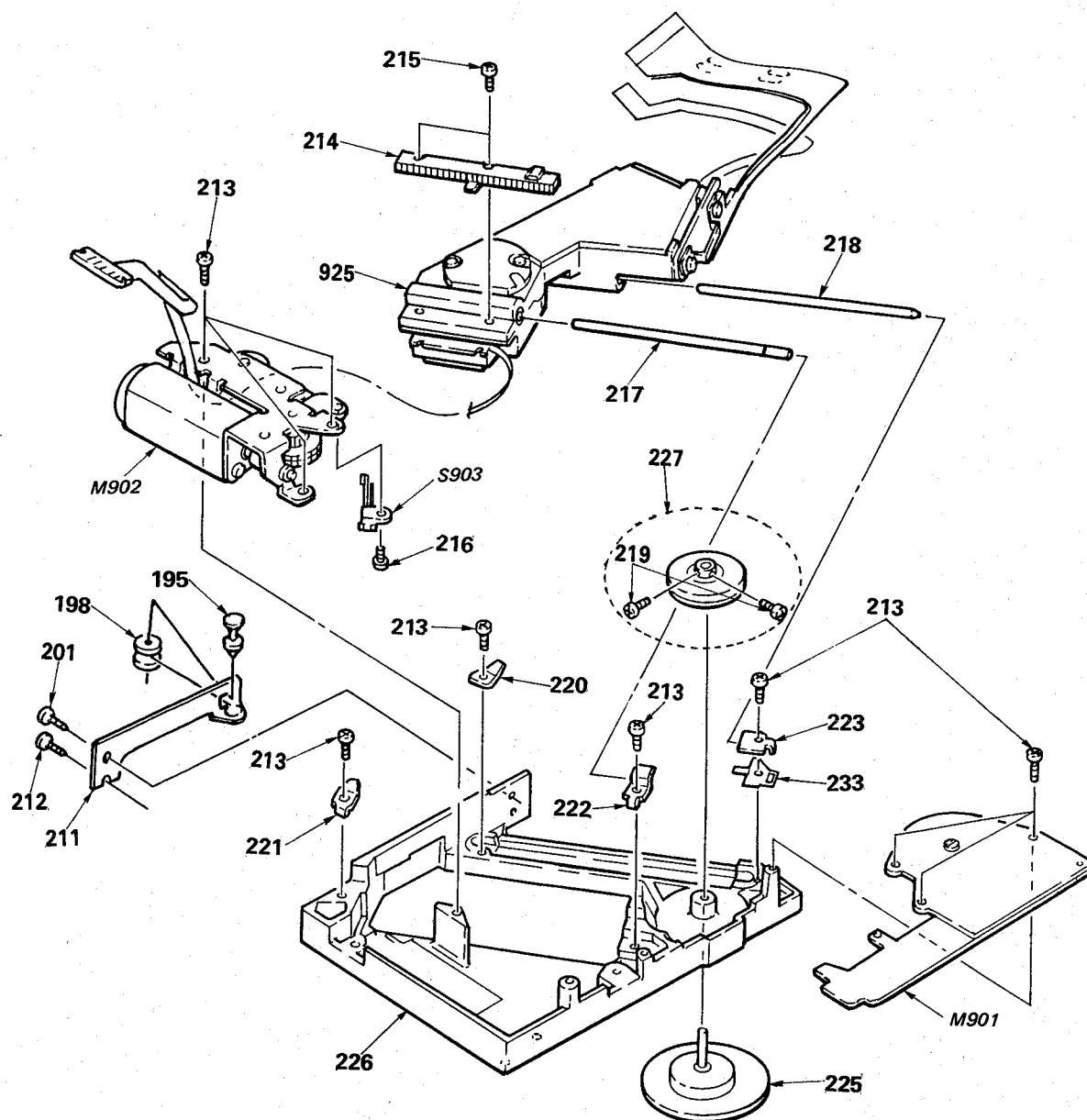
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(9)



NOTE:

The mechanical parts with no reference number in the exploded views are not supplied.

Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The construction parts of an assembled part are indicated with a collation number in the remark column.

No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
1	3-308-823-11	SPRING		24	3-320-224-01	RACK, POINTER	
2	*4-910-288-01	(US,Canadian)...LABEL, MODEL NUMBER		25	3-320-225-01	POINTER	
	*4-910-292-01	(AEP)...LABEL, MODEL NUMBER		26	3-320-226-01	SPRING	
	*4-910-293-01	(G-AEP)...LABEL, MODEL NUMBER		27	4-910-230-01	HANDLE	
	*4-910-294-01	(UK)...LABEL, MODEL NUMBER		28	4-910-231-01	PLATE, SIDE, HANDLE	
	*4-910-296-01	(E)...LABEL, MODEL NUMBER					
3	3-314-109-00	KNOB, LEVER		29	*4-910-206-01	SPRING	
4	3-319-224-11	DAMPER, SMALL		30	4-910-247-01	TERMINAL, PLUS	
6	*X-4910-203-1	BRACKET (B) ASSY, HANDLE		31	4-910-205-01	SPRING	
7	*X-4910-202-1	BRACKET (A) ASSY, HANDLE		32	3-320-232-01	SPRING	
8	3-320-205-11	LEVER (B), EJECT		33	4-910-204-01	SPRING	
				34	*3-320-277-01	PLATE (E), SHIELD	
9	3-320-206-01	PLATE, LOCK, EJECT		35	*3-320-236-01	HEAT SINK	
10	4-910-287-01	SPRING		36	3-320-237-01	RIVET	
11	*3-320-208-01	COVER, MD		37	*4-910-213-01	SHAFT, BUTTON	
12	3-320-210-11	BUTTON, REV		38	3-320-239-01	LEVER, SWITCH	
13	3-320-211-11	BUTTON, REV					
14	3-320-212-11	BUTTON, STOP		39	3-320-240-01	LEVER, RESET	
15	3-320-213-11	BUTTON, FWD		40	3-320-242-01	SPRING	
16	3-320-214-11	BUTTON, FF		41	*3-320-243-01	PLATE, BLIND, SWITCH	
17	3-320-215-11	BUTTON, REC		42	3-320-245-01	LEVER, EJECT	
18	3-320-216-11	BUTTON, PAUSE		43	3-320-246-01	PLATE, SPRING, BUTTON	
19	3-320-217-11	BUTTON, REC MUTE		44	3-320-247-11	RETAINER, SPRING	
20	*3-320-218-01	SUPPORT		45	3-320-248-01	GEAR, TUNING	
21	3-320-221-21	KNOB, CONTROL		46	3-320-249-01	GEAR, TUNING CAPACITOR	
22	*3-320-222-01	HOLDER, LED		47	*3-320-251-11	CHASSIS, BUTTON	
23	3-320-223-11	KNOB, TUNING		49	7-685-792-04	SCREW +PTT 2.6X6 (S)	
				50	3-320-253-31	LID, BATTERY CASE	
No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
51	*3-320-254-01	HOLDER, CASSETTE		76	7-685-247-19	SCREW +KTP 3X10 TYPE2 NON-SLIT	
52	*3-320-255-01	CHASSIS, CONTROL		77	*3-701-946-34	(US,Canadian)...LABEL, FUSE	
53	4-910-240-01	(AEP,UK)...CABINET (REAR)		78	7-685-648-11	SCREW +BVTP 3X12 TYPE2 N-S	
	4-910-240-12	(US,Canadian)...CABINET (REAR)		79	7-685-781-04	SCREW +BVTT 2X4 (S)	
	4-910-240-22	(E)...CABINET (REAR)		80	7-685-105-19	SCREW +P 2X8 TYPE2 NON-SLIT	
54	4-910-255-01	BOX, SPEAKER		81	7-685-852-01	SCREW +BVTT 2X5 (S)	
55	4-910-255-11	BOX, SPEAKER		82	7-627-556-37	SCREW, PRECISION +P 2.6X4 TYPE 1	
56	3-319-824-01	FOOT					
57	4-910-248-01	TERMINAL, MINUS		83	X-4910-207-2	(E)...CABINET ASSY, FRONT	
58	4-910-203-01	BUTTON, OPEN			X-4910-208-2	(US,Canadian)...CABINET ASSY, FRONT	
					X-4910-209-2	(AEP,UK)...CABINET ASSY, FRONT	
					X-4910-210-2	(G-AEP)...CABINET ASSY, FRONT	
59	3-489-093-00	SPRING, TENSION		84	X-4910-205-1	LID ASSY, CASSETTE	
61	3-320-276-01	WASHER, STOPPER		85	A-3239-356-A	ESCUTCHEON ASSY, TWEETER	
62	3-572-077-11	BUTTON, REC MUTE		86	*X-3320-201-1	BEARING (A) ASSY, LID	
63	3-703-135-00	SCREW, TAPPING		87	*X-3320-202-1	BEARING (B) ASSY, LID	
64	3-703-136-00	SCREW, TAPPING					
65	3-831-441-XX	CUSHION, SPEAKER		88	7-685-852-01	SCREW +BVTT 2X5 (S)	
66	3-701-999-02	(US)...LABEL, SERIAL NUMBER		89	*3-703-043-21	(UK)...LABEL, CAUTION, MAIN	
67	*3-847-723-00	PIN, LEAD		90	*3-701-948-14	(E,AEP,UK)...LABEL, FUSE	
68	7-685-646-71	SCREW +BVTP 3X8 TYPE2 IT-3		91	A-3239-357-A	ESCUTCHEON ASSY, WOOFER	
69	7-623-422-07	LW 3, TYPE B					
70	*3-701-946-28	(US,Canadian)...LABEL, FUSE		92	7-688-001-11	W 2, MIDDLE	
	*3-701-948-13	(E,AEP,UK)...LABEL, FUSE		93	7-685-660-14	SCREW +BVTP 4X10 TYPE2 SLIT	
71	7-624-106-04	STOP RING 3.0, TYPE -E		94	7-685-659-29	SCREW +BVTP 4X8 TYPE2 SLIT	
72	7-682-549-09	SCREW +B 3X10		95	7-685-648-19	SCREW +BVTP 3X12 TYPE2 N-S	
73	7-685-104-14	SCREW +PTP 2.0X6 TYPE2 SLIT					
74	7-685-154-14	SCREW +P 3X35 TYPE2 NON-SLIT		96	7-685-648-79	SCREW +BVTP 3X12 TYPE2 IT-3	
75	*3-701-946-22	(US,Canadian)...LABEL, FUSE		97	7-685-645-71	SCREW +BVTP 3X6 TYPE2 IT-3	
	*3-701-948-12	(AEP,UK)...LABEL, FUSE		98	7-682-559-04	SCREW +B 4X5	
	*3-701-948-22	(E,AEP,UK)...LABEL, FUSE		100	*3-701-748-00	CLAMP	

No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
101	*4-910-229-01	CHASSIS, POWER		121	3-319-204-01	SCREW (A), ORNAMENTAL	
102	*4-910-279-01	SHIELD, PC BOARD		122	3-319-288-01	FOOT	
103	*3-320-263-01	PLATE (B), SHIELD		123	4-910-208-01	KNOB, FUNCTION	
104	9-911-837-XX	SPACER		124	*4-911-801-01	(E,AEP,UK)...STOPPER, LEAD	
105	9-911-838-XX	CUSHION		125	3-319-266-01	CLAW, SPK LOCK	
106	4-907-033-11	BUTTON, REMAIN MODE		126	3-560-308-00	SHEET (B), INSULATING	
107	*4-885-838-01	(AEP,UK)...LABEL, CLASS 1		127	*4-910-251-01	LABEL, SPEAKER	
108	4-907-060-01	BUTTON, STOP		128	7-623-510-01	LUG, 4	
109	4-907-057-01	BUTTON, PLAY PAUSE		130	*4-885-843-02	(AEP)...LABEL, CAUTION, LASER	
110	4-907-059-01	BUTTON, FR		135	4-910-254-01	PLATE, RETURN, REMAIN BUTTON	
111	4-907-058-01	BUTTON, FF		137	4-910-274-01	PLATE (B), SHIELD, ELECTROSTATIC	
113	9-911-816-01	CLOTH, BATTERY DRAWER		138	*4-910-253-01	SPRING	
114	3-325-817-01	CUSHION, TWEETER		140	*4-910-271-01	SPRING	
115	*3-319-221-01	REINFORCEMENT		141	7-685-648-71	SCREW +BVTP 3X12 TYPE2 IT-3	
116	3-319-833-01	CUSHION, WOOFER		142	9-911-843-XX	CUSHION	
117	*3-319-289-01	ABSORBENT, ACOUSTIC		143	*4-910-295-01	PLATE, SHIELD	
118	3-319-294-01	NET, DUCT		145	*4-910-289-01	SHIELD, GRAPHIC EQUALIZER	
119	3-325-814-11	BOARD, BAFFLE, SPEAKER					
No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
151	4-910-280-01	SHEET, FLEXIBLE COVER		182	4-910 214-01	SHAFT, LID	
153	7-627-850-27	SCREW, PRECISION +P 1.4X3		183	4-910-225-01	SPRING (B)	
154	7-685-103-14	SCREW +P 2X5 TYPE2 NON-SLIT		184	4-910-215-01	SPRING	
155	7-621-773-86	SCREW +B 2.6X4		185	*4-910-233-01	BRACKET (A)	
156	*4-910-267-01	REINFORCEMENT		186	3-703-707-41	STICKER, SONY SYMBOL (21)	
157	*3-703-044-26	(US,Canadian)...LABEL, FUSE CAUTION		188	*4-908-789-01	SPACER, HOLDER	
158	9-911-840-XX	CUSHION, LID		189	9-911-815-01	CUSHION	
160	4-907-077-01	FOIL, SHIELD		190	4-908-711-01	LABEL, CAUTION, LENS	
161	*4-910-283-01	RETAINER, LCD		192	7-632-205-01	SHEET, ADHESIVE, FLEXIBLE	
172	3-701-441-11	WASHER		193	*4-907-035-01	HOLDER, FLEXIBLE	
173	4-910-212-01	SPRING		194	*X-4910-201-1	CHASSIS ASSY, MAIN	
174	9-911-863-XX	FIBER (A)		195	4-908-754-01	SCREW	
175	*4-910-211-01	LEVER, OPEN		196	7-627-551-58	SCREW, PRECISION +P 1.4X3	
177	4-910-241-01	CABINET, CD		198	4-908-755-01	INSULATOR (2001)	
179	4-910-246-02	ARM, CD		199	3-703-816-02	SCREW (M1.4X2.0), SPECIAL HEAD	
180	7-685-204-19	SCREW +KTP 2X6 TYPE2 NON-SLIT		200	4-908-750-01	COVER, MD	
181	X-4910-204-1	LID SUB ASSY, CD					
No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
201	7-627-553-38	SCREW, PRECISION +P 2X3		219	2-622-805-01	SCREW	
203	3-527-213-00	(E,Canadian,UK,AEP)...LABEL, SERIAL NUMBER		220	3-320-104-01	RETAINER (C)	
205	4-907-040-01	HOLDER (B), INSULATOR		221	3-320-103-01	RETAINER (B)	
206	4-907-050-01	HOLDER (C), INSULATOR		222	3-320-102-01	RETAINER (A)	
207	7-627-850-68	SCREW, PRECISION +P 1.4X4		223	3-320-105-01	RETAINER (D)	
208	3-563-105-00	SHEET, INSULATING, MOTOR PCB		225	X-3320-101-1	TURNTABLE ASSY	
209	*4-907-076-01	PLATE, SHIELD, CLV		226	*X-3320-103-3	CHASSIS ASSY	
211	4-907-039-01	HOLDER (A), INSULATOR		227	X-2622-803-1	ROTOR ASSY	
212	7-627-452-17	SCREW, PRECISION +K 2X3		231	*4-910-234-01	BRACKET (B)	
213	3-703-816-11	SCREW (M1.4X4.0), SPECIAL HEAD		232	7-623-110-01	W 4, SMALL	
214	3-320-121-01	RACK		233	3-320-130-01	SPRING (A), LEAF	
215	7-627-552-77	SCREW, PRECISION +P 1.7X6		234	3-320-133-01	SPACER, RACK	
216	7-627-553-37	SCREW, PRECISION +P 2X3		235	7-624-102-04	STOP RING 1.5, TYPE -E	
217	3-320-106-01	SHAFT (A)		236	7-627-553-27	SCREW, PRECISION +P 2X2.5	
218	3-320-107-01	SHAFT (B)		237	4-910-216-01	GEAR, R	

No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
301	3-306-302-00	SPRING, COMPRESSION		327	3-313-759-01	COLLAR (P)	
302	3-307-390-00	BUSHING, LOADING SPRING		328	3-313-762-01	SPRING (N)	
303	3-307-394-00	RETAINER (B), THRUST			3-313-762-11	SPRING (N)	
304	3-307-831-00	SCREW, PANEL			3-313-762-21	SPRING (N)	
306	3-307-948-11	WASHER, NYLON		329	3-313-763-11	SPRING (R)	
307	3-308-460-00	BELT, CAPSTAN			3-313-763-11	SPRING (R)	
308	3-313-708-00	GEAR, DECELERATION			3-313-763-11	SPRING (R)	
309	3-313-709-00	GEAR, REVERSE		330	3-313-784-00	SPRING	
310	3-313-710-00	LEVER, FWD		331	*3-313-785-00	SHAFT, DETECTION LEVER	
311	3-313-713-00	LEVER, NR		332	*3-313-786-00	RETAINER, SLIDER	
312	3-313-716-00	LEVER, FF		333	3-313-787-00	SPRING	
313	3-313-718-00	LEVER, REC TRIGGER		334	3-313-791-00	CLAMP	
314	3-313-720-00	LEVER, REW		335	3-313-792-00	GEAR, FWD CAM	
315	3-313-723-00	LEVER, NR TRIGGER		336	*3-313-794-00	SLIDER (B), NR	
316	*3-313-724-00	SLIDER, NR TRIGGER		337	3-313-795-00	GEAR, FF CAM	
317	3-313-733-00	LEVER (A), REC		338	3-313-796-00	GEAR, REW CAM	
318	3-313-744-00	GEAR, FR		339	3-313-798-00	SLIDER (R), PAUSE	
319	3-313-745-00	GEAR, REW		341	*3-313-803-12	LEVER, DETECTION	
320	3-313-746-00	LEVER, AMS LOCK		342	3-313-807-00	SPRING (POWER TENSION), TENSION	
321	*3-313-747-00	SLIDER, GEAR RELEASE		343	3-313-808-00	SPRING, TENSION	
322	3-313-749-00	SPRING, LEAF		344	3-313-811-00	BRAKE (S)	
323	3-313-851-01	GEAR, HEAD		345	3-313-812-00	BRAKE (T)	
324	3-313-755-00	GEAR, FAN MOLD		346	3-313-814-00	CLAW (T), REEL	
325	3-313-756-00	COLLAR (G)		347	3-313-815-00	SPRING, TENSION	
326	3-313-757-01	SHIM (F), HEAD		348	3-313-816-00	BELT, SQUARE (71X1.3)	
	3-313-757-11	SHIM (F), HEAD		349	3-313-823-00	BELT, SQUARE (55.6X1.3)	
	3-313-757-21	SHIM (F), HEAD		350	3-313-824-00	SPRING, TENSION	

No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
351	3-313-849-01	SPRING, TENSION		375	3-571-850-12	SPRING, COMPRESSION	
352	3-313-841-01	SCREW, ADJUSTMENT			3-571-850-21	SPRING, COMPRESSION	
353	3-313-842-01	SPRING, LEAF		376	3-652-612-21	CUSHION (B)	
354	3-313-846-01	LEVER (C), REC		377	3-701-437-11	WASHER	
355	3-319-287-01	GUIDE, TAPE		378	7-627-553-28	SCREW +P 2X2.5	
356	3-313-811-00	BRAKE (S)		379	3-701-438-11	WASHER, 2.5	
357	3-515-169-11	SPRING, TENSION		380	3-701-439-11	WASHER	
358	3-489-073-00	SCREW, THRUST		381	3-701-445-11	WASHER, 7	
359	3-507-111-00	SPRING, TENSION		382	3-885-228-00	CUSHION (B)	
360	3-515-167-00	SPRING, TENSION		384	3-538-051-00	RUBBER, BRAKE	
361	3-534-558-00	SPRING, TENSION		385	4-874-259-00	RUBBER, SHOCK ABSORBING	
362	3-535-625-00	WASHER, HANDLE		386	7-621-255-55	SCREW +P 2X8	
363	3-539-234-00	SPRING, TENSION		387	7-621-772-18	SCREW +B 2X4	
364	3-542-475-00	SPRING, TENSION		388	7-624-193-08	STOP RING 3, GRIP	
365	3-542-481-00	SPRING, TENSION		389	7-627-553-28	SCREW, PRECISION +P 2X2.5	
366	3-545-542-00	SPRING, TENSION		390	7-627-556-48	SCREW +P 2.6X4.5	
367	3-547-668-00	SPRING, TENSION		392	7-671-111-11	BALL, STEEL 1.5MM	
368	*4-910-291-01	BRACKET, FUSE BOARD		393	7-685-105-14	TPG +P 2X8, TYPE 2, NON-SLIT	
369	3-570-027-00	SCREW, MOTOR		395	3-307-948-01	WASHER, NYLON	
370	3-570-118-00	CUSHION, MOTOR		397	7-685-852-04	SCREW +BVTT 2X5 (S)	
371	3-570-552-00	SPRING, TENSION		398	7-688-001-13	W 2, MIDDLE	
372	3-570-615-00	POLY-WASHER (DIA.1.2)		399	X-3313-308-1	PULLEY, MOTOR	
373	3-571-844-00	CRAW, REEL		400	X-3313-732-1	FLYWHEEL (N) ASSY	
374	3-571-850-00	SPRING, COMPRESSION					

No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
401	X-3313-705-0	LEVER (N) ASSY, IDLER		416	*X-3313-733-1	CHASSIS ASSY, MECHANICAL	
402	X-3313-706-0	LEVER (R) ASSY, IDLER		417	X-3313-728-1	BASE SUB ASSY, HEAD	
403	X-3313-707-0	SLIDER (A) ASSY, NR		418	X-3313-730-1	BRACKET ASSY, COUNTER	
404	X-3313-708-0	TABLE ASSY, REEL, SUPPLY		419	*X-3313-731-1	RETAINER ASSY, THRUST	
405	X-3313-709-0	TABLE ASSY, REEL, TAKE-UP		420	X-3319-204-1	BRACKET ASSY, HEAD	
406	X-3313-710-0	PINCH LEVER (N) SUB ASSY		421	X-3313-703-0	FLYWHEEL ASSY	
407	X-3313-711-0	PINCH LEVER (R) SUB ASSY		422	*3-313-790-00	CLAMP	
408	X-3313-712-0	SLIDER (N) ASSY, PAUSE		423	3-319-286-01	SHEET, REFLECTION	
409	X-3313-716-0	CHASSIS SUB ASSY, SUB		424	3-445-074-01	WASHER	
410	X-3313-717-0	LEVER SUB ASSY, FF LOCK		425	3-533-223-11	SPRING, TENSION	
411	X-3313-718-2	LEVER ASSY, PAUSE		426	3-554-222-00	WASHER (2), CAPSTAN	
412	X-3313-719-0	LEVER SUB ASSY, REW LOCK		427	7-627-556-38	SCREW +P 2.6X4.0	
413	X-3313-720-0	PULLEY ASSY, FR		428	3-313-850-01	SPRING, TENSION	
414	X-3313-722-0	LEVER (B) ASSY, FR		429	7-685-790-04	SCREW +BVT 2.6X4 (S)	
415	X-3313-723-0	MOTOR SUB ASSY		430	*3-313-800-00	RETAINER, THRUST	

SECTION 6 ELECTRICAL PARTS LIST

NOTE:

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:

MF: μ F, PF: μ F.

RESISTORS

- All resistors are in ohms.
- F : nonflammable

COILS

MMH : mH, UH : μ H

SEMICONDUCTORS

In each case, U : μ , for example:UA....: μ A...., UPA....: μ PA...., UPC....: μ PC,UPD....: μ PD....

ELECTRICAL PARTS

Ref.No.	Part No.	Description
901	1-452-202-00	MAGNET
902	1-533-162-00	HOLDER, FUSE
903	*1-535-243-21	CONTACT, CONNECTOR
904	*1-535-511-11	FRAME, LEAD (F TYPE)
905	1-536-833-11	TERMINAL BOARD (SPEAKER)
906	1-548-564-31	COUNTER, TAPE (SMALL TYPE)
907	*1-561-148-00	HOUSING, CONNECTOR 4P
908	*1-561-557-00	CONTACT, RECEPTACLE
909	*1-561-586-00	HOUSING, CONNECTOR 5P
910	*1-561-587-00	HOUSING, CONNECTOR 6P
911	*1-561-588-00	HOUSING, CONNECTOR 8P
912	1-612-589-11	PC BOARD, LEADER DETECTION
913	*1-615-405-00	PC BOARD, POWER
914	*1-615-406-00	PC BOARD, CONTROL
915	*1-615-407-00	PC BOARD, SHUT OFF
916	*1-615-408-00	PC BOARD, TRANSLATION (B)
917	*1-615-409-00	PC BOARD, BUTTON
918	*1-615-410-00	PC BOARD, TRANSLATION (A)
919	*1-615-411-00	PC BOARD, LED
920	*A-3015-294-A	(CD PLAYER)...PC BOARD ASSY, SUB
921	*A-3070-134-A	(CD PLAYER)...MOUNTED PCB, MAIN
922	*A-3215-842-A	PC BOARD ASSY, MAIN
923	*A-3273-074-A	MOUNTED PCB, CONTROL
924	*A-3273-074-A	MOUNTED PCB, CONTROL
925	8-848-006-01	DEVICE, OPTICAL (KSS-110A)
926	X-2622-801-1	(M901 OF CD)...PC BOARD ASSY, STATOR
927	1-131-367-00	(CD STATOR BOARD)... TANTALUM 22MF 20% 20V
928	1-163-141-00	(CD STATOR BOARD)... CERAMIC CHIP 0.001MF 10% 50V
929	1-163-038-00	(CD STATOR BOARD)... CERAMIC CHIP 0.1MF 25V
930	1-216-032-00	(CD STATOR BOARD)... METAL CHIP 200 5% 1/10W
931	1-216-050-00	(CD STATOR BOARD)... METAL CHIP 1.1K 5% 1/10W
932	1-216-057-00	(CD STATOR BOARD)... METAL CHIP 2.2K 5% 1/10W
933	1-216-063-00	(CD STATOR BOARD)... METAL CHIP 3.9K 5% 1/10W
934	1-216-090-00	(CD STATOR BOARD)... METAL CHIP 51K 5% 1/10W
935	1-216-298-00	(CD STATOR BOARD)... METAL CHIP 2.2 5% 1/10W
936	1-216-324-11	(CD STATOR BOARD)... METAL CHIP 10K 1% 1/10W
937	1-216-325-11	(CD STATOR BOARD)... METAL CHIP 100K 1% 1/10W
938	1-421-673-11	(CD STATOR BOARD)...COIL, CHOKE 70UH
939	8-719-101-23	(CD STATOR BOARD)...DIODE 1SS123
940	*1-616-738-00	PC BOARD, FUSE

ELECTRICAL PARTS

Ref.No.	Part No.	Description
ANT	1-501-309-11	ANTENNA, TELESCOPIC
C1	1-102-953-00	(E,AEP,US,Canadian,UK).... CERAMIC 18PF 5% 50V
C1	1-102-961-00	(G-AEP)...CERAMIC 24PF 10% 50V
C1	1-123-646-00	(CD).....ELECT 33MF 20% 6.3V
C2	1-101-004-00	CERAMIC 0.01MF 50V
C2	1-163-109-00	(CD)...CERAMIC CHIP 47PF 5% 50V
C3	1-162-195-31	CERAMIC 4.7PF 10% 50V
C3	1-163-109-00	(CD)...CERAMIC CHIP 47PF 5% 50V
C4	1-162-283-31	CERAMIC 120PF 10% 50V
C4	1-163-088-00	(CD)...CERAMIC CHIP 5PF 0.25PF 50V
C5	1-101-004-00	CERAMIC 0.01MF 50V
C5	1-163-021-00	(CD)...CERAMIC CHIP 0.01MF 10% 50V
C6	1-101-004-00	CERAMIC 0.01MF 50V
C7	1-101-004-00	CERAMIC 0.01MF 50V
C7	1-123-646-00	(CD)...ELECT 33MF 20% 6.3V
C8	1-101-004-00	CERAMIC 0.01MF 50V
C8	1-163-114-00	(CD)...CERAMIC CHIP 75PF 5% 50V
C9	1-162-197-31	CERAMIC 6.8PF 10% 50V
C9	1-163-114-00	(CD)...CERAMIC CHIP 75PF 5% 50V
C10	1-102-514-00	CERAMIC 22PF 10% 50V
C10	1-102-517-00	(G-AEP).....CERAMIC 30PF 5% 50V
C10	1-163-074-00	(CD)...CERAMIC CHIP 0.033MF 10% 25V
C11	1-102-808-00	(US,Canadian)...CERAMIC 6PF 5% 50V
C11	1-135-091-00	(CD)...TANTAL CHIP 1MF 10% 16V
C11	1-162-197-31	(E,AEP,UK)...CERAMIC 6.8PF 10% 50V
C12	1-123-646-00	(CD)...ELECT 33MF 20% 6.3V
C12	1-162-187-31	(E)....CERAMIC 1PF 20% 50V
C13	1-123-379-00	ELECT 0.47MF 20% 50V
C13	1-163-021-00	(CD)...CERAMIC CHIP 0.01MF 10% 50V
C14	1-123-382-00	ELECT 3.3MF 20% 50V
C14	1-123-661-00	(CD)...ELECT 100MF 20% 6.3V
C15	1-123-382-00	ELECT 3.3MF 20% 50V
C15	1-163-038-00	(CD)...CERAMIC CHIP 0.1MF 25V
C16	1-102-864-00	CERAMIC 5PF 0.5PF 50V
C16	1-163-038-00	(CD)...CERAMIC CHIP 0.1MF 25V
C17	1-101-005-00	CERAMIC 0.022MF 50V
C17	1-135-091-00	(CD)...TANTAL. CHIP 1MF 10% 16V
C18	1-101-004-00	CERAMIC 0.01MF 50V
C19	1-101-004-00	CERAMIC 0.01MF 50V
C20	1-124-443-00	(CD)...ELECT 100MF 20% 10V
C21	1-123-356-00	ELECT 10MF 20% 16V
C22	1-101-880-00	CERAMIC 47PF 5% 50V
C23	1-101-005-00	CERAMIC 0.022MF 50V
C24	1-162-282-31	CERAMIC 100PF 10% 50V
C25	1-162-282-31	CERAMIC 100PF 10% 50V
C26	1-162-195-31	CERAMIC 4.7PF 10% 50V

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C27	1-101-005-00	CERAMIC	0.022MF		50V
C28	1-161-054-00	CERAMIC	0.018MF	10%	25V
C29	1-101-005-00	CERAMIC	0.022MF		50V
C30	1-123-380-00	ELECT	1MF	20%	50V
C31	1-123-382-00	ELECT	3.3MF	20%	50V
C32	1-161-938-00	CERAMIC	0.001MF	5%	50V
C33	1-123-382-00	ELECT	3.3MF	20%	50V
C34	1-123-379-00	ELECT	0.47MF	20%	50V
C35	1-123-379-00	ELECT	0.47MF	20%	50V
C36	1-161-021-00	CERAMIC	0.047MF	10%	25V
C37	1-161-021-00	CERAMIC	0.047MF	10%	25V
C38	1-124-443-00	ELECT	100MF	20%	10V
C39	1-123-356-00	ELECT	10MF	20%	16V
C40	1-101-005-00	CERAMIC	0.022MF		50V
C41	1-101-004-00	CERAMIC	0.01MF		50V
C42	1-123-356-00	ELECT	10MF	20%	16V
C43	1-101-004-00	CERAMIC	0.01MF		50V
C44	1-162-282-00	(US,Canadian)...CERAMIC	100PF		50V
C45	1-123-382-00	ELECT	3.3MF	20%	50V
C46	1-102-965-00	CERAMIC	39PF	10%	50V
C101	1-123-369-00	ELECT	4.7MF	20%	25V
C101	1-163-212-00	(CD)...CERAMIC CHIP	0.002MF	5%	50V
C102	1-102-117-00	CERAMIC	820PF	10%	50V
C102	1-123-646-00	(CD)...ELECT	33MF	20%	6.3V
C103	1-162-294-31	CERAMIC	0.001MF	10%	50V
C103	1-163-188-00	(CD)...CERAMIC CHIP	200PF	5%	50V
C104	1-124-443-00	ELECT	100MF	20%	10V
C104	1-163-335-11	(CD)...CERAMIC CHIP	0.001MF	5%	50V
C105	1-130-487-00	MYLAR	0.022MF	5%	50V
C105	1-163-335-11	(CD)...CERAMIC CHIP	0.001MF	5%	50V
C106	1-130-485-00	MYLAR	0.015MF	5%	50V
C106	1-163-335-11	(CD)...CERAMIC CHIP	0.001MF	5%	50V
C107	1-123-382-00	ELECT	3.3MF	20%	50V
C107	1-163-108-00	(CD)...CERAMIC CHIP	43PF	5%	50V
C108	1-102-110-00	CERAMIC	220PF	10%	50V
C108	1-163-211-00	(CD)...CERAMIC CHIP	0.0018MF	5%	50V
C109	1-101-367-00	CERAMIC	160PF	5%	50V
C110	1-123-382-00	ELECT	3.3MF	20%	50V
C110	1-163-335-11	(CD)...CERAMIC CHIP	0.001MF	5%	50V
C111	1-130-473-00	MYLAR	0.0015MF	5%	50V
C111	1-163-108-00	(CD)...CERAMIC CHIP	43PF	5%	50V
C112	1-123-369-00	ELECT	4.7MF	20%	25V
C112	1-163-056-00	(CD)...CERAMIC CHIP	0.0056MF	10%	50V
C113	1-130-477-00	(CD)...MYLAR	0.0033MF	5%	50V
C113	1-130-479-00	MYLAR	0.0047MF	5%	50V
C114	1-123-380-00	ELECT	1MF	20%	50V
C114	1-131-375-00	(CD)...TANTALUM	4.7MF	20%	10V
C115	1-130-486-00	MYLAR	0.018MF	5%	50V
C115	1-131-375-00	(CD)...TANTALUM	4.7MF	20%	10V
C116	1-127-475-00	ELECT(SOLID)	0.22MF	5%	25V
C116	1-163-055-00	(CD)...CERAMIC CHIP	0.0047MF	10%	50V
C117	1-131-407-00	ELECT(SOLID)	0.68MF	5%	25V
C118	1-130-489-00	MYLAR	0.033MF	5%	50V
C119	1-123-382-00	ELECT	3.3MF	20%	50V
C120	1-123-382-00	ELECT	3.3MF	20%	50V
C121	1-123-382-00	ELECT	3.3MF	20%	50V
C122	1-123-382-00	ELECT	3.3MF	20%	50V
C123	1-123-382-00	ELECT	3.3MF	20%	50V
C125	1-130-481-00	MYLAR	0.0068MF	5%	50V
C126	1-130-475-00	MYLAR	0.0022MF	5%	50V

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C127	1-123-382-00	ELECT	3.3MF	20%	50V
C128	1-130-484-00	MYLAR	0.012MF	5%	50V
C129	1-123-382-00	ELECT	3.3MF	20%	50V
C130	1-123-382-00	ELECT	3.3MF	20%	50V
C141	1-123-332-00	ELECT	47MF	20%	16V
C146	1-130-497-00	MYLAR	0.15MF	5%	50V
C148	1-124-445-00	ELECT	100MF	20%	16V
C150	1-124-555-00	ELECT	1000MF	20%	16V
C152	1-102-947-00	CERAMIC	10PF	5%	50V
C154	1-162-282-31	CERAMIC	100PF	10%	50V
C155	1-161-045-00	CERAMIC	0.0033MF	10%	50V
C161	1-123-382-00	ELECT	3.3MF	20%	50V
C162	1-102-113-00	(CD)...CERAMIC	390PF	10%	50V
C163	1-161-049-00	(CD)...CERAMIC	0.0068MF	10%	25V
C164	1-123-330-00	(CD)...ELECT	22MF	20%	16V
C165	1-161-040-00	CERAMIC	0.0012MF	10%	25V
C166	1-161-055-00	CERAMIC	0.022MF	10%	25V
C167	1-123-382-00	ELECT	3.3MF	20%	50V
C168	1-102-074-00	CERAMIC	0.001MF	10%	50V
C169	1-161-046-00	CERAMIC	0.0039MF	10%	25V
C170	1-161-023-00	CERAMIC	0.068MF	10%	25V
C171	1-161-052-00	CERAMIC	0.012MF	10%	25V
C172	1-136-169-00	FILM	0.22MF	5%	50V
C173	1-131-407-00	ELECT(SOLID)	0.68MF	5%	25V
C174	1-161-058-00	CERAMIC	0.039MF	10%	25V
C176	1-162-294-31	CERAMIC	0.001MF	10%	50V
C177	1-123-553-00	ELECT(NONPOLARIZED)	15MF	20%	50V
C178	1-130-495-00	MYLAR	0.1	5%	50V
C179	1-162-282-31	CERAMIC	100PF	10%	50V
C180	1-162-282-31	CERAMIC	100PF	10%	50V
C181	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C182	1-102-106-00	(US,Canadian)...CERAMIC	100PF	5%	50V
C190	1-123-546-00	ELECT(NONPOLARIZED)	3.3MF	20%	50V
C301	1-123-379-00	ELECT	0.47MF	20%	50V
C301	1-163-109-00	(CD)...CERAMIC CHIP	47PF	5%	50V
C302	1-162-294-31	CERAMIC	0.001MF	10%	50V
C302	1-163-099-00	(CD)...CERAMIC CHIP	18PF	5%	50V
C303	1-124-169-00	ELECT	100MF	20%	10V
C303	1-163-109-00	(CD)...CERAMIC CHIP	47PF	5%	50V
C304	1-123-330-00	ELECT	22MF	20%	16V
C304	1-163-141-00	(CD)...CERAMIC CHIP	0.001MF	10%	50V
C305	1-123-647-00	(CD)...ELECT	47MF	20%	6.3V
C305	1-124-444-00	ELECT	220MF	20%	10V
C306	1-123-820-00	(CD)...ELECT	33MF	20%	16V
C307	1-124-444-00	ELECT	220MF	20%	10V
C307	1-131-375-00	(CD)...TANTALUM	4.7MF	20%	10V
C308	1-124-444-00	ELECT	220MF	20%	10V
C308	1-131-375-00	(CD)...TANTALUM	4.7MF	20%	10V
C309	1-123-356-00	ELECT	10MF	20%	16V
C310	1-123-369-00	ELECT	4.7MF	20%	25V
C310	1-123-647-00	(CD)...ELECT	47MF	20%	6.3V
C311	1-123-318-00	ELECT	33MF	20%	16V
C312	1-123-379-00	ELECT	0.47MF	20%	50V
C312	1-123-647-00	(CD)...ELECT	47MF	20%	6.3V
C313	1-123-380-00	ELECT	1MF	20%	50V
C313	1-123-646-00	(CD)...ELECT	33MF	20%	6.3V
C314	1-106-182-00	MYLAR	0.0027MF	5%	100V
C314	1-123-646-00	(CD)...ELECT	33MF	20%	6.3V

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C315	1-106-174-00	MYLAR	0.0012MF	5%	100V
C315	1-123-298-00	(CD)...ELECT	470MF	20%	6.3V
C316	1-123-298-00	(CD)...ELECT	470MF	20%	6.3V
C316	1-124-443-00	ELECT	100MF	20%	10V
C317	1-123-306-00	ELECT	47MF	20%	10V
C317	1-123-320-00	(CD)...ELECT	100MF	20%	16V
C318	1-124-443-00	ELECT	100MF	20%	10V
C319	1-123-379-00	ELECT	0.47MF	20%	50V
C319	1-123-661-00	(CD)...ELECT	100MF	20%	6.3V
C320	1-123-382-00	ELECT	3.3MF	20%	50V
C320	1-123-661-00	(CD)...ELECT	100MF	20%	6.3V
C321	1-123-379-00	ELECT	0.47MF	20%	50V
C321	1-135-092-21	(CD)...TANTAL. CHIP	3.3MF	20%	16V
C322	1-102-973-00	(CD)...CERAMIC	100PF	5%	50V
C322	1-130-495-00	MYLAR	0.1MF	5%	50V
C323	1-123-381-00	ELECT	2.2MF	20%	50V
C324	1-123-343-00	ELECT	33MF	20%	25V
C325	1-162-306-31	CERAMIC	0.01MF	30%	16V
C326	1-123-382-00	ELECT	3.3MF	20%	50V
C330	1-162-294-31	CERAMIC	0.001MF	10%	50V
C331	1-123-306-00	ELECT	47MF	20%	10V
C332	1-162-294-31	CERAMIC	0.001MF	10%	50V
C334	1-124-120-11	ELECT	220MF	20%	25V
C335	1-124-477-11	ELECT	47MF	20%	25V
C337	1-123-321-00	ELECT	220MF	20%	16V
C338	1-162-282-31	CERAMIC	100PF	10%	50V
C339	1-124-444-00	ELECT	220MF	20%	10V
C340	1-101-004-00	CERAMIC	0.01MF		50V
C341	1-124-444-00	ELECT	220MF	20%	10V
C343	1-123-379-00	ELECT	0.47MF	20%	50V
C344	1-124-445-00	ELECT	100MF	20%	16V
C501	1-123-646-00	(CD)...ELECT	33MF	20%	6.3V
C502	1-131-379-00	(CD)...TANTALUM	22MF	20%	10V
C503	1-163-038-00	(CD)...CERAMIC CHIP	0.1MF		25V
C504	1-163-081-00	(CD)...CERAMIC CHIP	0.22MF		25V
C505	1-163-033-00	(CD)...CERAMIC CHIP	0.022MF	10%	25V
C506	1-163-075-00	(CD)...CERAMIC CHIP	0.047MF	10%	25V
C507	1-163-021-00	(CD)...CERAMIC CHIP	0.01MF	10%	50V
C508	1-163-114-00	(CD)...CERAMIC CHIP	75PF	5%	50V
C509	1-163-109-00	(CD)...CERAMIC CHIP	47PF	5%	50V
C510	1-163-081-00	(CD)...CERAMIC CHIP	0.22MF		25V
C511	1-135-103-00	(CD)...TANTAL. CHIP	3.3MF	10%	4V
C512	1-163-124-00	(CD)...CERAMIC CHIP	200PF	5%	50V
C513	1-163-019-00	(CD)...CERAMIC CHIP	0.0068MF	10%	50V
C514	1-163-021-00	(CD)...CERAMIC CHIP	0.01MF	10%	50V
C515	1-163-019-00	(CD)...CERAMIC CHIP	0.0068MF	10%	50V
C516	1-163-013-00	(CD)...CERAMIC CHIP	0.0022MF	10%	50V
C518	1-163-021-00	(CD)...CERAMIC CHIP	0.01MF	10%	50V
C519	1-163-143-00	(CD)...CERAMIC CHIP	0.0012MF	10%	50V
C520	1-163-038-00	(CD)...CERAMIC CHIP	0.1MF		25V
C521	1-163-038-00	(CD)...CERAMIC CHIP	0.1MF		25V
C522	1-163-038-00	(CD)...CERAMIC CHIP	0.1MF		25V
C523	1-135-088-21	(CD)...TANTAL. CHIP	2.2MF	20%	20V
C524	1-135-088-21	(CD)...TANTAL. CHIP	2.2MF	20%	20V
C525	1-163-038-00	(CD)...CERAMIC CHIP	0.1MF		25V
C526	1-163-038-00	(CD)...CERAMIC CHIP	0.1MF		25V
C527	1-135-088-21	(CD)...TANTAL. CHIP	2.2MF	20%	20V
C528	1-163-038-00	(CD)...CERAMIC CHIP	0.1MF		25V

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C529	1-163-033-00	(CD)...CERAMIC CHIP	0.022MF	10%	25V
C530	1-163-033-00	(CD)...CERAMIC CHIP	0.022MF	10%	25V
C531	1-135-091-00	(CD)...TANTAL. CHIP	1MF	10%	16V
C532	1-163-033-00	(CD)...CERAMIC CHIP	0.022MF	10%	25V
C533	1-163-021-00	(CD)...CERAMIC CHIP	0.01MF	10%	50V
C534	1-163-021-00	(CD)...CERAMIC CHIP	0.01MF	10%	50V
C535	1-163-021-00	(CD)...CERAMIC CHIP	0.01MF	10%	50V
C536	1-131-408-00	(CD)...TANTALUM	1MF	10%	25V
C538	1-135-083-00	(CD)...TANTAL. CHIP	0.47MF	10%	25V
C601	1-161-183-00	CERAMIC	0.0068MF	5%	25V
C601	1-163-038-00	(CD)...CERAMIC CHIP	0.1MF		25V
C602	1-130-480-00	MYLAR	0.0056MF	5%	50V
C602	1-163-101-00	(CD)...CERAMIC CHIP	22PF	5%	50V
C603	1-123-356-00	ELECT	10MF	20%	16V
C603	1-163-101-00	(CD)...CERAMIC CHIP	22PF	5%	50V
C604	1-123-318-00	ELECT	33MF	20%	16V
C604	1-163-038-00	(CD)...CERAMIC CHIP	0.1MF		25V
C605	1-124-444-00	ELECT	220MF	20%	10V
C605	1-135-091-00	(CD)...TANTAL CHIP	1MF	10%	16V
C606	1-124-444-00	ELECT	220MF	20%	10V
C606	1-163-113-00	(CD)...CERAMIC CHIP	68PF	5%	50V
C607	1-123-617-00	(CD)...ELECT	10MF	20%	16V
C607	1-124-444-00	ELECT	220MF	20%	10V
C608	1-123-306-00	ELECT	47MF	20%	10V
C608	1-163-063-00	(CD)...CERAMIC CHIP	0.022MF	10%	50V
C609	1-163-594-00	(CD)...CERAMIC CHIP	33PF	5%	50V
C610	1-163-105-00	(CD)...CERAMIC CHIP	33PF	5%	50V
C611	1-163-123-00	(CD)...CERAMIC CHIP	180PF	5%	50V
C612	1-162-306-31	CERAMIC	0.01MF	30%	16V
C612	1-163-833-00	(CD)...CERAMIC CHIP	0.068MF		25V
C613	1-123-321-00	ELECT	220MF	20%	6.3V
C614	1-123-382-00	ELECT	3.3MF	20%	50V
C614	1-163-022-00	(CD)...CERAMIC CHIP	0.012MF	10%	50V
C615	1-123-617-00	ELECT	10MF	20%	16V
C615	1-163-021-00	(CD)...CERAMIC CHIP	0.01MF	10%	50V
C616	1-123-380-00	ELECT	1MF	20%	50V
C616	1-163-038-00	(CD)...CERAMIC CHIP	0.1MF		25V
C617	1-123-381-00	ELECT	2.2MF	20%	50V
C617	1-123-646-00	(CD)...ELECT	33MF	20%	6.3V
C618	1-123-356-00	ELECT	10MF	20%	16V
C618	1-123-646-00	(CD)...ELECT	33MF	20%	6.3V
C619	1-163-594-00	(US:CD)...CERAMIC CHIP	33PF	5%	50V
C620	1-163-594-00	(US:CD)...CERAMIC CHIP	33PF	5%	50V
C701	1-101-004-00	CERAMIC	0.01MF		50V
C702	1-101-004-00	CERAMIC	0.01MF		50V
C703	1-101-004-00	CERAMIC	0.01MF		50V
C704	1-124-564-11	ELECT	4700MF	20%	25V
C801	1-124-555-00	ELECT	1000MF	20%	16V
C801	1-163-119-00	(CD)...CERAMIC CHIP	120PF	5%	50V
C802	1-124-555-00	ELECT	1000MF	20%	16V
C802	1-131-385-00	(CD)...TANTALUM	22MF	20%	6.3V
C803	1-123-330-00	ELECT	22MF	20%	16V
C803	1-131-361-00	(CD)...TANTALUM	2.2MF	20%	20V
C804	1-124-555-00	ELECT	1000MF	20%	16V
C901	1-123-306-00	ELECT	47MF	20%	10V
C901	1-163-017-00	(CD)...CERAMIC CHIP	0.0047MF	10%	50V
CF1	1-527-786-00	FILTER, CERAMIC			
CF2	1-527-786-00	FILTER, CERAMIC			
CF3	1-527-865-00	FILTER, CERAMIC			

The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

ELECTRICAL PARTS

Ref.No.	Part No.	Description
CNJ301	*1-561-414-11	SOCKET, CONNECTOR 9P
CNJ302	*1-562-827-11	SOCKET, CONNECTOR 15P
CNJ701	*1-526-818-11	(US,Canadian)...INLET, AC
CNJ701	*1-526-822-11	(E,AEP).....INLET, AC
CNJ701	*1-526-838-11	(UK).....INLET, AC
CNJ902	*1-561-581-00	HOUSING, CONNECTOR 2P
CNJ904	*1-561-147-00	CONNECTOR, HOUSING 3P
CNJ906	*1-561-584-00	HOUSING, CONNECTOR 3P
CNJ907	*1-561-148-00	HOUSING, CONNECTOR 4P
CNJ908	*1-561-148-00	HOUSING, CONNECTOR 4P
CNJ909	*1-561-147-00	HOUSING, CONNECTOR 3P
CNP301	*1-564-585-11	CONNECTOR, PIN (U TYPE) 9P
CNP302	*1-564-933-11	CONNECTOR, PIN (U TYPE) 15P
CNP901	*1-560-468-00	PIN, CONNECTOR 5P
CNP902	*1-560-455-00	PIN, CONNECTOR 2P
CNP903	*1-560-469-00	PIN, CONNECTOR 6P
CNP904	*1-508-734-00	CONNECTOR PIN
CNP905	*1-508-797-00	PIN, CONNECTOR 4P
CNP906	*1-560-459-00	PIN, CONNECTOR 3P
CNP907	*1-508-847-00	PIN, CONNECTOR 4P
CNP908	*1-560-462-00	PIN, CONNECTOR 6P
CNP90*	*1-508-734-00	PIN, CONNECTOR 3P
CNP910	*1-560-470-00	PIN, CONNECTOR 8P
CP301	1-464-261-00	OSCILLATOR UNIT, BIAS (MAIN UNIT)
CP301	1-464-378-12	(E,US,Canadian,AEP:CD)... CONVERTER UNIT, DC-DC
CP301	1-464-378-13	(UK)...CONVERTER UNIT, DC-DC
CT1-4	1-151-466-11	CAP, TUNING, POLYETHYLENE
CV1-4		
D1	8-719-911-19	DIODE 1SS119
D1	8-719-921-11	(CD)...DIODE HZ2ALL
D2	8-719-911-19	DIODE 1SS119
D3	8-719-111-13	DIODE SP113
D4	8-719-918-97	DIODE SLP153B-40
D5	8-719-918-98	DIODE SLP253B-40
D301	8-719-911-19	DIODE 1SS119
D302	8-719-911-19	DIODE 1SS119
D303	8-719-911-06	DIODE 1SS106
D304	8-719-911-19	DIODE 1SS119
D305	8-719-911-19	DIODE 1SS119
D306	8-719-911-19	DIODE 1SS119
D308	8-719-918-97	DIODE SLP153B-40
D309	8-719-150-49	DIODE (US,Canadian)...RD12EB2T
D309	8-719-150-56	DIODE (E,AEP,UK).....RD12EB2T
D310	8-719-100-14	DIODE RD3.0E-B1
D401	8-719-902-35	DIODE SLP235B
D403	8-719-912-45	DIODE SLP435B
D404	8-719-901-35	DIODE SLP135B
D405	8-719-911-19	DIODE 1SS119
D501	8-719-105-82	DIODE RD5.1M-B2
D502	8-719-100-03	DIODE 1S2835
D503	8-719-100-03	DIODE 1S2835
D504	8-719-100-03	DIODE 1S2835
D505	8-719-100-03	DIODE 1S2835
D506	8-719-100-03	DIODE 1S2835
D507	8-719-100-03	DIODE 1S2835

ELECTRICAL PARTS

Ref.No.	Part No.	Description
D508	8-719-100-03	DIODE 1S2835
D509	8-719-100-03	DIODE 1S2835
D510	8-719-100-03	DIODE 1S2835
D511	8-719-101-23	DIODE 1SS123
D512	8-719-101-23	DIODE 1SS123
D513	8-719-911-06	DIODE 1SS106
D515	8-719-101-23	DIODE 1SS123
D516	8-719-101-23	DIODE 1SS123
D601	8-719-101-23	(CD)...DIODE 1SS123
D601	8-719-911-19	DIODE 1SS119
D602	8-719-911-19	DIODE 1SS119
D602	8-719-923-64	(CD)...DIODE KV1230
D603	8-719-911-19	DIODE 1SS119
D604	8-719-911-19	DIODE 1SS119
D605	8-719-100-48	DIODE RD8.2E-B2
D606	8-719-911-19	DIODE 1SS119
D607	8-719-911-19	DIODE 1SS119
D608	8-719-911-19	DIODE 1SS119G
D609	8-719-100-29	DIODE RD5.1E-B1
D610	8-719-911-19	DIODE 1SS119
D611	8-719-911-19	DIODE 1SS119
D612	8-719-911-19	DIODE 1SS119
D613	8-719-911-19	DIODE 1SS119
D614	8-719-911-19	DIODE 1SS119
D615	8-719-911-19	DIODE 1SS119
D616	8-719-911-19	DIODE 1SS119
D617	8-719-911-19	DIODE 1SS119
D618	8-719-911-19	DIODE 1SS119
D619	8-719-200-02	DIODE 10E-2
D701	8-719-503-06	DIODE S3WB60Z
D801	8-719-100-03	(CD)...DIODE 1S2835
D801	8-719-901-66	DIODE LT-9200N
D802	8-719-100-03	(CD)...DIODE 1S2835
D802	8-719-911-19	DIODE 1SS119
D803	8-719-911-19	DIODE 1SS119
D803	8-719-101-51	(CD)...DIODE RD5.1E-L3
D804	8-719-911-19	DIODE 1SS119
D901	8-719-800-08	DIODE TLR213
F301	1-532-215-00	(E).....FUSE, TIME-LAG, 0.8A
F301	1-532-284-00	(AEP,UK).....FUSE, TIME-LAG, 0.630A
F301	1-532-555-00	(US,Canadian)...FUSE, GLASS TUBE 1.6A
F302	1-532-325-00	(E,AEP,UK).....FUSE, TIME-LAG, 6.3A
F302	1-532-656-00	(US,Canadian)...FUSE, GLASS TUBE 6.3A
F303	1-532-779-00	(E)...FUSE, MICRO (SECONDARY DC)
F801	1-532-078-00	(E,AEP,UK).....FUSE, TIME-LAG, 1.0A
F801	1-532-555-00	(US,Canadian)...FUSE, GLASS TUBE 1.6A
F901	1-532-684-00	(US,Canadian)...FUSE, GLASS TUBE 0.8A
F901	1-532-215-00	(E,AEP,UK).....FUSE, TIME-LAG, T 0.8A
FL1	1-231-892-00	FILTER, BANDPASS
FL2	1-235-221-00	FILTER, LOW PASS
FL101	1-235-403-11	FILTER, LOW PASS
FL201	1-235-403-11	FILTER, LOW PASS
HE101	8-825-516-22	HEAD, REC/PB ERASE(EPP266-3602)
HRP101	8-825-516-22	HEAD, REC/PB ERASE(EPP266-3602)

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ELECTRICAL PARTS

Ref.No.	Part No.	Description
IC1	8-752-010-90	IC CX20109
IC2	8-759-700-43	IC NJM4558M
IC51	8-759-801-24	IC LA1260S
IC52	8-759-200-62	IC TA7343P
IC101	8-759-908-16	IC TL072CPS
IC102	8-759-745-64	IC NJM4560M
IC151	8-759-801-23	IC LA3600
IC201	8-759-908-16	IC TL072CPS
IC202	8-759-745-64	IC NJM4560M
IC251	8-759-801-23	IC LA3600
IC301	8-752-013-30	IC CX20133
IC302	8-759-103-25	IC UPD4053BG
IC303	8-759-103-25	IC UPD4053BG
IC304	8-759-745-64	IC NJM4560M
IC305	8-759-700-40	IC NJM4560S
IC351	8-759-800-66	IC LA3161
IC352	8-759-300-32	IC HA12047
IC353	8-759-800-71	IC LA2010
IC354	8-759-841-26	IC LA4126T
IC501	8-752-010-80	IC CX20108
IC502	8-759-700-43	IC NJM4558M
IC503	8-759-103-09	IC UPC4082G2
IC504	8-759-700-75	IC NJM2901MB
IC505	8-759-700-75	IC NJM2901MB
IC506	8-759-908-81	IC MB3763PF
IC507	8-759-908-81	IC MB3763PF
IC508	8-759-908-81	IC MB3763PF
IC509	8-759-200-79	IC TC4049BF
IC601	8-759-912-52	IC CX23035
IC602	8-759-302-69	IC HM6116FP-3
IC603	8-759-103-09	IC UPC4082G2
IC604	8-759-700-43	IC NJM4558M
IC651	8-759-202-58	IC TC9310N-049
IC801	8-759-920-27	IC MB88541-130M
IC802	8-759-912-55	IC S-81250HG
J301	1-562-838-11	JACK, PIN 4P (LINE IN/LINE OUT)
J302	1-507-678-00	JACK (MIC MIXING)
J304	1-562-837-11	JACK (PHONES)
J305	1-507-954-11	JACK, EXTERNAL POWER (DC IN 12V)
JR301	1-216-295-00	METAL CHIP 0 5% 1/10W
JR302	1-216-295-00	METAL CHIP 0 5% 1/10W
JR503	1-216-295-00	METAL CHIP 0 5% 1/10W
JR801	1-216-296-00	METAL CHIP 0 5% 1/8W
L1	1-459-397-00	COIL (WITH CORE)
L2	1-410-012-21	MICRO INDUCTOR 1.8UH
L3	1-459-393-00	COIL (WITH CORE)
L4	1-402-105-11	ANTENNA, FERRITE-ROD (MW)
L101	1-408-928-00	MICRO INDUCTOR 22MMH
L102	1-408-922-00	MICRO INDUCTOR 6.8MMH
L201	1-408-928-00	MICRO INDUCTOR 22MMH
L202	1-408-922-00	MICRO INDUCTOR 6.8MMH
L301	1-408-080-00	MICRO INDUCTOR 100UH
L301	1-408-728-21	(CD)...INDUCTOR CHIP 1UH
L601	1-408-579-00	MICRO INDUCTOR 220UH
L602	1-410-009-11	MICRO INDUCTOR 1UH
L603	1-405-982-00	COIL, OSC (SW1)

ELECTRICAL PARTS

Ref.No.	Part No.	Description
M901	X-2622-801-1	PC BOARD ASSY, STATOR
M902	X-3320-102-1	MOTOR ASSY, FEED
ND901	1-807-179-11	(E,AEP,UK).....LIQUID CRYSTAL MODULE
ND901	1-807-179-21	(US,Canadian)....LIQUID CRYSTAL MODULE
PH751	8-719-913-55	DIODE GP-2S04-B
PM901	1-454-351-00	SOLENOID, PLUNGER
PM902	1-454-351-00	SOLENOID, PLUNGER
PM903	1-454-352-00	SOLENOID, PLUNGER
PS301A	1-532-685-00	LINK, IC
PS302A	1-532-605-00	(UK:CD)...LINK, IC
Q1	8-729-101-07	(CD)...TRANSISTOR 2SB798
Q1	8-729-119-32	TRANSISTOR 2SK193
Q2	8-729-883-92	TRANSISTOR 2SC2839
Q3	8-729-162-44	(CD)...TRANSISTOR 2SB624
Q3	8-729-672-42	TRANSISTOR 2SC2724-C
Q4	8-729-802-12	TRANSISTOR 2SC2840-DL
Q5	8-729-606-33	TRANSISTOR 2SC2603F
Q101	8-729-105-53	(CD)...TRANSISTOR 2SK300
Q101	8-729-606-33	TRANSISTOR 2SC2603F
Q102	8-729-100-13	TRANSISTOR 2SC2001
Q103	8-729-606-33	TRANSISTOR 2SC2603F
Q104	8-729-606-33	TRANSISTOR 2SC2603F
Q105	8-729-100-13	TRANSISTOR 2SC2001
Q201	8-729-105-53	(CD)...TRANSISTOR 2SK300
Q201	8-729-606-33	TRANSISTOR 2SC2603F
Q202	8-729-100-13	TRANSISTOR 2SC2001
Q203	8-729-606-33	TRANSISTOR 2SC2603F
Q204	8-729-606-33	TRANSISTOR 2SC2603F
Q205	8-729-100-13	TRANSISTOR 2SC2001
Q301	8-729-101-07	(CD)...TRANSISTOR 2SB798
Q301	8-729-606-33	TRANSISTOR 2SC2603F
Q302	8-729-606-33	TRANSISTOR 2SC2603F
Q303	8-729-801-45	TRANSISTOR 2SC3064-E
Q304	8-729-162-44	(CD)...TRANSISTOR 2SB624
Q304	8-729-606-33	TRANSISTOR 2SC2603F
Q305	8-729-162-44	(CD)...TRANSISTOR 2SB624
Q305	8-729-606-33	TRANSISTOR 2SC2603F
Q306	8-729-199-92	(CD)...TRANSISTOR 2SD999
Q306	8-729-800-83	TRANSISTOR 2SB808
Q307	8-729-606-33	TRANSISTOR 2SC2603F
Q308	8-729-901-00	(CD)...TRANSISTOR DTC124EK
Q309	8-729-401-63	TRANSISTOR 2SD1273-P
Q310	8-729-224-63	TRANSISTOR 2SK246-BL
Q401	8-729-606-33	TRANSISTOR 2SC2603F
Q402	8-729-606-33	TRANSISTOR 2SC2603F
Q601	8-729-606-33	TRANSISTOR 2SC2603F
Q602	8-729-606-33	TRANSISTOR 2SC2603F
Q603	8-729-162-44	(CD)...TRANSISTOR 2SB624
Q603	8-729-606-33	TRANSISTOR 2SC2603F
Q604	8-729-606-33	TRANSISTOR 2SC2603F
Q605	8-729-606-33	TRANSISTOR 2SC2603F
Q606	8-729-606-33	TRANSISTOR 2SC2603F

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Les composants identifiés par une trame et une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

ELECTRICAL PARTS

Ref.No.	Part No.	Description				
Q607	8-729-401-63	TRANSISTOR 2SD1273-P				
Q608	8-729-378-84	TRANSISTOR 2SD788				
Q609	8-729-224-63	TRANSISTOR 2SK246-BL				
Q610	8-729-606-33	TRANSISTOR 2SC2603F				
Q611	8-729-204-83	TRANSISTOR 2SA1048				
Q612	8-729-606-33	TRANSISTOR 2SC2603F				
Q613	8-729-606-33	TRANSISTOR 2SC2603F				
Q614	8-729-606-33	TRANSISTOR 2SC2603F				
Q801	8-729-401-63	TRANSISTOR 2SD1273-P				
Q802	8-729-606-33	TRANSISTOR 2SC2603F				
Q803	8-729-606-33	TRANSISTOR 2SC2603F				
Q804	8-729-204-83	TRANSISTOR 2SA1048				
Q805	8-729-606-33	TRANSISTOR 2SC2603F				
Q901	8-729-606-33	TRANSISTOR 2SC2603F				
Q902	8-729-101-13	TRANSISTOR PH103				
R1	1-247-831-00	CARBON	1K	5%	1/6W	
R2	1-216-105-00	(CD)...METAL CHIP	220K	5%	1/10W	
R2	1-247-827-00	CARBON	680	5%	1/6W	
R3	1-216-109-00	(CD)...METAL CHIP	330K	5%	1/10W	
R3	1-247-843-00	CARBON	3.3K	5%	1/6W	
R4	1-247-899-00	CARBON	680K	5%	1/6W	
R5	1-247-819-00	CARBON	330	5%	1/6W	
R6	1-247-827-00	CARBON	680	5%	1/6W	
R7	1-216-081-00	(CD)...METAL CHIP	22K	5%	1/10W	
R7	1-247-819-00	CARBON	330	5%	1/6W	
R8	1-247-823-00	CARBON	470	5%	1/6W	
R9	1-247-827-00	CARBON	680	5%	1/6W	
R10	1-247-899-00	CARBON	680K	5%	1/6W	
R11	1-247-807-00	CARBON	100	5%	1/6W	
R12	1-216-099-00	(CD)...METAL CHIP	120K	5%	1/10W	
R12	1-247-845-00	CARBON	3.9K	5%	1/6W	
R13	1-216-101-00	(CD)...METAL CHIP	150K	5%	1/10W	
R13	1-247-875-00	CARBON	68K	5%	1/6W	
R14	1-216-117-00	(CD)...METAL CHIP	680K	5%	1/10W	
R14	1-247-807-00	CARBON	100	5%	1/6W	
R15	1-247-879-00	CARBON	100K	5%	1/6W	
R16	1-247-879-00	CARBON	100K	5%	1/6W	
R17	1-249-419-11	CARBON	1.5K	5%	1/6W	
R18	1-249-429-11	CARBON	10K	5%	1/6W	
R19	1-247-831-00	CARBON	1K	5%	1/6W	
R20	1-216-091-00	(CD)...METAL CHIP	56K	5%	1/10W	
R20	1-249-429-11	CARBON	10K	5%	1/6W	
R21	1-216-129-00	(CD)...METAL CHIP	2.2M	5%	1/10W	
R21	1-247-851-00	CARBON	6.8K	5%	1/6W	
R22	1-247-849-00	CARBON	5.6K	5%	1/6W	
R23	1-216-063-00	(CD)...METAL CHIP	3.9K	5%	1/10W	
R23	1-247-829-00	CARBON	820	5%	1/6W	
R24	1-216-057-00	(CD)...METAL CHIP	2.2K	5%	1/10W	
R24	1-247-696-11	CARBON	47	5%	1/4W F	
R25	1-216-043-00	(CD)...METAL CHIP	560	5%	1/10W	
R25	1-247-831-00	CARBON	1K	5%	1/6W	
R26	1-216-164-00	(CD)...METAL CHIP	39	5%	1/8W	
R26	1-247-847-00	CARBON	4.7K	5%	1/6W	
R27	1-216-164-00	(CD)...METAL CHIP	39	5%	1/8W	
R27	1-247-831-00	CARBON	1K	5%	1/6W	
R28	1-216-097-00	(CD)...METAL CHIP	100K	5%	1/10W	
R28	1-249-429-11	CARBON	10K	5%	1/6W	
R29	1-216-057-00	(CD)...METAL CHIP	2.2K	5%	1/10W	
R29	1-247-833-00	CARBON	1.2K	5%	1/6W	

ELECTRICAL PARTS

Ref.No.	Part No.	Description				
R30	1-216-061-00	(CD)...METAL CHIP	3.3K	5%	1/10W	
R30	1-247-887-00	CARBON	220K	5%	1/6W	
R31	1-247-843-00	CARBON	3.3K	5%	1/6W	
R32	1-247-843-00	CARBON	3.3K	5%	1/6W	
R33	1-249-421-11	CARBON	2.2K	5%	1/6W	
R34	1-249-421-11	CARBON	2.2K	5%	1/6W	
R35	1-249-421-00	CARBON	2.2K	5%	1/6W	
R36	1-249-421-00	CARBON	2.2K	5%	1/6W	
R37	1-247-101-00	CARBON	56	5%	1/4W F	
R38	1-247-807-00	CARBON	100	5%	1/6W	
R101	1-216-330-11	(CD)...METAL CHIP	7.5K	1%	1/10W	
R101	1-247-806-00	CARBON	91	5%	1/6W	
R102	1-216-333-11	(CD)...METAL CHIP	15K	1%	1/10W	
R102	1-247-881-00	CARBON	120K	5%	1/6W	
R103	1-216-333-11	(CD)...METAL CHIP	15K	1%	1/10W	
R103	1-247-819-00	CARBON	330	5%	1/6W	
R104	1-216-333-11	(CD)...METAL CHIP	15K	1%	1/10W	
R104	1-247-843-00	CARBON	3.3K	5%	1/6W	
R105	1-216-329-11	(CD)...METAL CHIP	5.1K	1%	1/10W	
R105	1-247-879-00	CARBON	100K	5%	1/6W	
R106	1-216-336-11	(CD)...METAL CHIP	47K	1%	1/10W	
R106	1-247-871-00	CARBON	47K	5%	1/6W	
R107	1-216-336-11	(CD)...METAL CHIP	47K	1%	1/10W	
R107	1-247-845-00	CARBON	3.9K	5%	1/6W	
R108	1-216-334-11	(CD)...METAL CHIP	22K	1%	1/10W	
R108	1-247-861-00	CARBON	18K	5%	1/6W	
R109	1-216-329-11	(CD)...METAL CHIP	5.1K	1%	1/10W	
R109	1-249-429-11	CARBON	10K	5%	1/6W	
R110	1-216-336-11	(CD)...METAL CHIP	47K	1%	1/10W	
R110	1-247-843-00	CARBON	3.3K	5%	1/6W	
R111	1-216-336-11	(CD)...METAL CHIP	47K	1%	1/10W	
R111	1-247-871-00	CARBON	47K	5%	1/6W	
R112	1-247-850-00	CARBON	6.2K	5%	1/6W	
R113	1-216-518-00	(CD)...METAL CHIP	2.2K	1%	1/10W	
R113	1-247-879-00	CARBON	100K	5%	1/6W	
R114	1-216-518-00	(CD)...METAL CHIP	2.2K	1%	1/10W	
R114	1-249-429-11	CARBON	10K	5%	1/6W	
R115	1-216-326-11	(CD)...METAL CHIP	1.8K	1%	1/10W	
R115	1-249-421-11	CARBON	2.2K	5%	1/6W	
R116	1-216-333-11	(CD)...METAL CHIP	15K	1%	1/10W	
R116	1-247-899-00	CARBON	680K	5%	1/6W	
R117	1-216-328-11	(CD)...METAL CHIP	4.3K	1%	1/10W	
R117	1-249-421-11	CARBON	2.2K	5%	1/6W	
R118	1-216-333-11	(CD)...METAL CHIP	15K	1%	1/10W	
R118	1-247-829-00	CARBON	820	5%	1/6W	
R119	1-216-328-11	(CD)...METAL CHIP	4.3K	1%	1/10W	
R119	1-247-847-00	CARBON	4.7K	5%	1/6W	
R120	1-216-037-00	(CD)...METAL CHIP	330	5%	1/10W	
R120	1-247-863-00	CARBON	22K	5%	1/6W	
R121	1-216-059-00	(CD)...METAL CHIP	2.7K	5%	1/10W	
R121	1-247-849-00	CARBON	5.6K	5%	1/6W	
R122	1-216-033-00	(CD)...METAL CHIP	220	5%	1/10W	
R122	1-247-807-00	CARBON	100	5%	1/6W	
R123	1-247-845-00	CARBON	3.9K	5%	1/6W	
R124	1-216-017-00	(CD)...METAL CHIP	47	5%	1/10W	
R124	1-247-831-00	CARBON	1K	5%	1/6W	
R125	1-216-065-00	(CD)...METAL CHIP	4.7K	5%	1/10W	
R125	1-247-899-00	CARBON	680K	5%	1/6W	
R126	1-216-085-00	(CD)...METAL CHIP	33K	5%	1/10W	
R126	1-247-834-00	CARBON	1.3K	5%	1/6W	

ELECTRICAL PARTS

Ref.No.	Part No.	Description				
R127	1-216-168-00	(CD)...METAL CHIP	56	5%	1/8W	
R127	1-247-831-00	CARBON	1K	5%	1/6W	
R128	1-216-033-00	(CD)...METAL CHIP	220	5%	1/10W	
R129	1-216-097-00	(CD)...METAL CHIP	100K	5%	1/10W	
R130	1-216-059-00	(CD)...METAL CHIP	2.7K	5%	1/10W	
R131	1-247-807-00	CARBON	100	5%	1/6W	
R132	1-247-847-00	CARBON	4.7K	5%	1/6W	
R133	1-247-872-00	CARBON	51K	5%	1/6W	
R134	1-247-845-00	CARBON	3.9K	5%	1/6W	
R136	1-247-805-00	CARBON	82	5%	1/6W	
R138	1-247-862-00	CARBON	20K	5%	1/6W	
R139	1-247-863-00	CARBON	22K	5%	1/6W	
R140	1-249-421-11	CARBON	2.2K	5%	1/6W	
R141	1-247-851-00	CARBON	6.8K	5%	1/6W	
R142	1-247-859-00	CARBON	15K	5%	1/6W	
R143	1-247-879-00	CARBON	100K	5%	1/6W	
R144	1-249-421-11	CARBON	2.2K	5%	1/6W	
R301	1-216-025-00	(CD)...METAL CHIP	100	5%	1/10W	
R301	1-247-899-00	CARBON	680K	5%	1/6W	
R302	1-216-045-00	(CD)...METAL CHIP	680	5%	1/10W	
R302	1-247-807-00	CARBON	100	5%	1/6W	
R303	1-216-337-11	(CD)...METAL CHIP	51K	1%	1/10W	
R303	1-247-843-00	CARBON	3.3K	5%	1/6W	
R304	1-247-807-00	CARBON	100	5%	1/6W	
R305	1-216-089-00	(CD)...METAL CHIP	47K	5%	1/10W	
R306	1-216-056-00	(CD)...METAL CHIP	2K	5%	1/10W	
R307	1-216-065-00	(CD)...METAL CHIP	4.7K	5%	1/10W	
R307	1-247-807-00	CARBON	100	5%	1/6W	
R308	1-216-065-00	(CD)...METAL CHIP	4.7K	5%	1/10W	
R308	1-249-421-11	CARBON	2.2K	5%	1/6W	
R309	1-216-089-00	(CD)...METAL CHIP	47K	5%	1/10W	
R309	1-247-807-00	CARBON	100	5%	1/6W	
R310	1-216-089-00	(CD)...METAL CHIP	47K	5%	1/10W	
R310	1-247-857-00	CARBON	12K	5%	1/6W	
R311	1-216-065-00	(CD)...METAL CHIP	4.7K	5%	1/10W	
R311	1-247-891-00	CARBON	330K	5%	1/6W	
R312	1-247-831-00	CARBON	1K	5%	1/6W	
R313	1-247-817-00	CARBON	270	5%	1/6W	
R314	1-247-899-00	CARBON	680K	5%	1/6W	
R315	1-247-859-00	CARBON	15K	5%	1/6W	
R316	1-217-527-00	FUSIBLE	22	5%	1/4W	
R317	1-247-093-00	CARBON	27	5%	1/4W	F
R318	1-247-831-00	CARBON	1K	5%	1/6W	
R319	1-247-879-00	CARBON	100K	5%	1/6W	
R320	1-247-807-00	CARBON	100	5%	1/6W	
R321	1-247-831-00	CARBON	1K	5%	1/6W	
R322	1-247-899-00	CARBON	680K	5%	1/6W	
R323	1-247-851-00	CARBON	6.8K	5%	1/6W	
R325	1-249-421-11	CARBON	2.2K	5%	1/6W	
R326	1-247-866-00	CARBON	30K	5%	1/6W	
R327	1-247-867-00	CARBON	33K	5%	1/6W	
R328	1-247-851-00	CARBON	6.8K	5%	1/6W	
R329	1-249-421-11	CARBON	2.2K	5%	1/6W	
R330	1-247-871-00	CARBON	47K	5%	1/6W	
R331	1-249-421-11	CARBON	2.2K	5%	1/6W	
R342	1-249-421-11	CARBON	2.2K	5%	1/6W	
R343	1-247-853-00	CARBON	8.2K	5%	1/6W	

ELECTRICAL PARTS

Ref.No.	Part No.	Description				
R344	1-247-823-00	CARBON	470	5%	1/6W	
R345	1-247-807-00	CARBON	100	5%	1/6W	
R346	1-247-825-00	CARBON	560	5%	1/6W	
R347	1-247-807-00	CARBON	100	5%	1/6W	
R401	1-249-419-11	CARBON	1.5K	5%	1/6W	
R402	1-247-829-00	CARBON	820	5%	1/6W	
R403	1-247-863-00	CARBON	22K	5%	1/6W	
R404	1-247-863-00	CARBON	22K	5%	1/6W	
R405	1-249-429-11	CARBON	10K	5%	1/6W	
R501	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R502	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R503	1-216-105-00	METAL CHIP	220K	5%	1/10W	
R504	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R505	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R506	1-216-055-00	METAL CHIP	1.8K	5%	1/10W	
R507	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R508	1-216-080-00	METAL CHIP	20K	5%	1/10W	
R509	1-216-103-00	METAL CHIP	180K	5%	1/10W	
R510	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R511	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R512	1-216-095-00	METAL CHIP	82K	5%	1/10W	
R513	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R514	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R515	1-216-063-00	METAL CHIP	3.9K	5%	1/10W	
R516	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R517	1-216-056-00	METAL CHIP	2K	5%	1/10W	
R518	1-216-091-00	METAL CHIP	56K	5%	1/10W	
R520	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R523	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R524	1-216-067-00	METAL CHIP	5.6K	5%	1/10W	
R525	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R526	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R527	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R528	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R531	1-216-331-11	METAL CHIP	9.1K	1%	1/10W	
R532	1-216-056-00	METAL CHIP	2K	5%	1/10W	
R533	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R534	1-216-105-00	METAL CHIP	220K	5%	1/10W	
R535	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R538	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R539	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R542	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R543	1-216-335-11	METAL CHIP	24K	1%	1/10W	
R544	1-216-332-11	METAL CHIP	11K	1%	1/10W	
R545	1-216-324-11	METAL CHIP	10K	1%	1/10W	
R546	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R547	1-216-324-11	METAL CHIP	10K	1%	1/10W	
R549	1-216-324-11	METAL CHIP	10K	1%	1/10W	
R550	1-216-331-11	METAL CHIP	9.1K	1%	1/10W	
R551	1-216-331-11	METAL CHIP	9.1K	1%	1/10W	
R552	1-216-324-11	METAL CHIP	10K	1%	1/10W	
R553	1-216-100-00	METAL CHIP	130K	5%	1/10W	
R554	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R555	1-216-075-00	METAL CHIP	12K	5%	1/10W	
R556	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R557	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R558	1-216-089-00	METAL CHIP	47K	5%	1/10W	

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R559	1-216-089-00	METAL CHIP	47K	5%	1/10W
R561	1-216-041-00	METAL CHIP	470	5%	1/10W
R562	1-216-542-00	METAL CHIP	12K	1%	1/10W
R563	1-216-333-11	METAL CHIP	15K	1%	1/10W
R564	1-216-333-11	METAL CHIP	15K	1%	1/10W
R565	1-216-542-00	METAL CHIP	12K	1%	1/10W
R566	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R569	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R570	1-216-107-00	METAL CHIP	270K	5%	1/10W
R571	1-216-104-00	METAL CHIP	200K	5%	1/10W
R572	1-216-104-00	METAL CHIP	200K	5%	1/10W
R573	1-216-102-00	METAL CHIP	160K	5%	1/10W
R576	1-216-081-00	METAL CHIP	22K	5%	1/10W
R577	1-216-080-00	METAL CHIP	20K	5%	1/10W
R584	1-216-077-00	METAL CHIP	15K	5%	1/10W
R585	1-216-097-00	METAL CHIP	100K	5%	1/10W
R586	1-216-081-00	METAL CHIP	22K	5%	1/10W
R587	1-216-089-00	METAL CHIP	47K	5%	1/10W
R588	1-216-083-00	METAL CHIP	27K	5%	1/10W
R589	1-216-121-00	METAL CHIP	1M	5%	1/10W
R595	1-216-097-00	METAL CHIP	100K	5%	1/10W
R597	1-216-097-00	METAL CHIP	100K	5%	1/10W
R598	1-216-105-00	METAL CHIP	220K	5%	1/10W
R599	1-216-105-00	METAL CHIP	220K	5%	1/10W
R601	1-216-065-00	(CD)...METAL CHIP	4.7K	5%	1/10W
R601	1-247-866-00	CARBON	30K	5%	1/6W
R602	1-216-059-00	(CD)...METAL CHIP	2.7K	5%	1/10W
R602	1-247-863-00	CARBON	22K	5%	1/6W
R603	1-216-338-11	(CD)...METAL CHIP	30K	1%	1/10W
R603	1-249-429-11	CARBON	10K	5%	1/6W
R604	1-216-338-11	(CD)...METAL CHIP	30K	1%	1/10W
R604	1-249-429-11	CARBON	10K	5%	1/6W
R605	1-216-065-00	(CD)...METAL CHIP	4.7K	5%	1/10W
R606	1-216-329-11	(CD)...METAL CHIP	5.1K	1%	1/10W
R607	1-216-085-00	(CD)...METAL CHIP	33K	5%	1/10W
R607	1-247-829-00	CARBON	820	5%	1/6W
R608	1-247-829-00	CARBON	820	5%	1/6W
R609	1-249-429-11	CARBON	10K	5%	1/6W
R610	1-216-097-00	(CD)...METAL CHIP	100K	5%	1/10W
R610	1-247-847-00	CARBON	4.7K	5%	1/6W
R611	1-216-065-00	(CD)...METAL CHIP	4.7K	5%	1/10W
R611	1-247-847-00	CARBON	4.7K	5%	1/6W
R612	1-216-097-00	(CD)...METAL CHIP	100K	5%	1/10W
R612	1-247-847-00	CARBON	4.7K	5%	1/6W
R613	1-216-121-00	(CD)...METAL CHIP	1M	5%	1/10W
R613	1-247-825-00	CARBON	560	5%	1/6W
R614	1-216-078-00	(CD)...METAL CHIP	16K	5%	1/10W
R614	1-247-807-00	CARBON	100	5%	1/6W
R615	1-216-057-00	(CD)...METAL CHIP	2.2K	5%	1/10W
R615	1-247-871-00	CARBON	47K	5%	1/6W
R616	1-216-069-00	(CD)...METAL CHIP	6.8K	5%	1/10W
R616	1-247-871-00	CARBON	47K	5%	1/6W
R617	1-216-069-00	(CD)...METAL CHIP	6.8K	5%	1/10W
R618	1-216-078-00	(CD)...METAL CHIP	16K	5%	1/10W
R618	1-247-831-00	CARBON	1K	5%	1/6W
R619	1-216-098-00	(CD)...METAL CHIP	110K	5%	1/10W
R619	1-247-879-00	CARBON	100K	5%	1/6W

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R620	1-216-075-00	(CD)...METAL CHIP	12K	5%	1/10W
R620	1-247-849-00	CARBON	5.6K	5%	1/6W
R621	1-216-074-00	(CD)...METAL CHIP	11K	5%	1/10W
R621	1-247-867-00	CARBON	33K	5%	1/6W
R622	1-247-879-00	CARBON	100K	5%	1/6W
R623	1-216-053-00	(CD)...METAL CHIP	1.5K	5%	1/10W
R623	1-247-883-00	CARBON	150K	5%	1/6W
R624	1-216-078-00	(CD)...METAL CHIP	16K	5%	1/10W
R624	1-247-823-00	CARBON	470	5%	1/6W
R625	1-216-089-00	(CD)...METAL CHIP	47K	5%	1/10W
R625	1-249-421-11	CARBON	2.2K	5%	1/6W
R626	1-216-081-00	(CD)...METAL CHIP	22K	5%	1/10W
R626	1-247-853-00	CARBON	8.2K	5%	1/6W
R627	1-216-089-00	(CD)...METAL CHIP	47K	5%	1/10W
R628	1-216-047-00	(CD)...METAL CHIP	820	5%	1/10W
R629	1-216-037-00	(CD)...METAL CHIP	330	5%	1/10W
R630	1-216-018-00	(CD)...METAL CHIP	51	5%	1/10W
R632	1-216-080-00	(CD)...METAL CHIP	20K	5%	1/10W
R633	1-216-065-00	(CD)...METAL CHIP	4.7K	5%	1/10W
R700	1-216-097-00	(CD)...METAL CHIP	100K	5%	1/10W
R701	1-216-089-00	(CD)...METAL CHIP	47K	5%	1/10W
R801	1-247-811-00	(E,UK,AEP).....CARBON	150	5%	1/6W
R801	1-247-819-00	(US,Canadian)....CARBON	330	5%	1/6W
R802	1-249-429-11	CARBON	10K	5%	1/6W
R803	1-249-429-11	CARBON	10K	5%	1/6W
R804	1-247-827-00	CARBON	680	5%	1/6W
R805	1-247-879-00	CARBON	100K	5%	1/6W
R806	1-216-085-00	(CD)...METAL CHIP	33K	5%	1/10W
R806	1-249-429-11	CARBON	10K	5%	1/6W
R807	1-216-085-00	(CD)...METAL CHIP	33K	5%	1/10W
R807	1-249-429-11	CARBON	10K	5%	1/6W
R808	1-216-085-00	(CD)...METAL CHIP	33K	5%	1/10W
R809	1-216-331-11	(CD)...METAL CHIP	9.1K	1%	1/10W
R810	A 1-202-858-00	(UK)....FUSIBLE	47		1/4W
R901	1-216-144-00	(CD)...METAL CHIP	5.6	5%	1/8W
R901	1-247-843-00	CARBON	3.3K	5%	1/6W
R902	1-247-863-00	CARBON	22K	5%	1/6W
R903	1-247-843-00	CARBON	3.3K	5%	1/6W
R904	1-247-825-00	CARBON	560	5%	1/6W
RV1	1-226-235-00	RES, ADJ, CARBON 5K			
RV1	1-230-518-11	(CD)...RES, ADJ, METAL GLAZE 220K			
RV2	1-230-518-11	RES, ADJ, METAL GLAZE 220K			
RV101	1-226-235-00	RES, ADJ, CARBON 5K (PLAYBACK LEVEL)			
RV102	1-226-237-00	RES, ADJ, CARBON 20K (RECORD LEVEL)			
RV103	1-226-240-00	RES, ADJ, CARBON 200K (RECORD BIAS)			
RV104	1-230-462-11	RES, VAR, SLIDE 100K/100K (10kHz)			
RV105	1-230-462-11	RES, VAR, SLIDE 100K/100K (4kHz)			
RV106	1-230-462-11	RES, VAR, SLIDE 100K/100K (1kHz)			
RV107	1-230-462-11	RES, VAR, SLIDE 100K/100K (400Hz)			
RV108	1-230-462-11	RES, VAR, SLIDE 100K/100K (100Hz)			
RV109	1-230-795-11	RES, VAR, SLIDE 20K (VOLUME)			
RV201	1-226-235-00	(G-AEP)...RES, ADJ, CARBON 5K			
RV201	1-226-850-00	(E,US,Canadian,AEP,UK).... RES, ADJ, CARBON 4.7K (PLAYBACK LEVEL)			
RV202	1-226-852-00	RES, ADJ, CARBON 22K (RECORD LEVEL)			
RV203	1-226-855-00	(E,US,Canadian,AEP,UK).... RES, ADJ, CARBON 200K (RECORD BIAS)			

The components identified by shading and mark A are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque A sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

ELECTRICAL PARTS

Ref.No.	Part No.	Description
RV209	1-230-795-11	RES, VAR, SLIDE 20K (VOLUME)
RV501	1-230-516-11	RES, ADJ, METAL GLAZE 10K (FOCUS GAIN)
RV502	1-230-517-11	RES, ADJ, METAL GLAZE 22K (TRACKING GAIN)
RV503	1-230-796-11	RES, ADJ, METAL GLAZE 4.7K (TRIANGLE WAVEFORM)
RV504	1-230-517-11	RES, ADJ, METAL GLAZE 22K (SLEDDING OFFSET)
S1	1-554-892-11	SWITCH, LEVER SLIDE (BAND SELECT)
S301	1-554-890-11	SWITCH, PUSH (1 KEY)(POWER)
S303	1-554-888-11	SWITCH, SLIDE (RECORD/PLAYBACK)
S304	1-570-199-11	SWITCH, LEVER SLIDE (FUNCTION)
S305	1-554-891-11	SWITCH, PUSH (1 KEY)(TAPE SELECT)
S306	1-554-889-11	SWITCH, PUSH (1 KEY)(DOLBY NR)
S307	1-554-798-21	SWITCH, SLIDE (ISS)
S401	1-553-856-00	SWITCH, KEY BOARD (REWIND)
S402	1-553-856-00	SWITCH, KEY BOARD (REVERSE PLAY)
S403	1-553-856-00	SWITCH, KEY BOARD (STOP)
S404	1-553-856-00	SWITCH, KEY BOARD (NORMAL PLAY)
S405	1-553-856-00	SWITCH, KEY BOARD (FAST FORWARD)
S406	1-553-856-00	SWITCH, KEY BOARD (PAUSE)
S407	1-553-856-00	SWITCH, KEY BOARD (RECORD)
S408	1-553-856-00	SWITCH, KEY BOARD (RECORD MUTING)
S409	1-553-856-00	SWITCH, KEY BOARD (SYNCHRO TAPE & CD)
S601	1-554-798-21	SWITCH, SLIDE (TIMER)
S602	1-554-893-11	SWITCH, LEAF (EJECT)
S603	1-554-889-11	SWITCH, PUSH (1 KEY)(DIRECTION MODE)
S701	1-552-026-00	(E).....SWITCH, VOLTAGE CHANGE OVER
S901	1-554-929-11	SWITCH, LEAF
S902	1-514-346-00	SWITCH, LEAF (OPEN/CLOSE,CD PLAYER)
S903	1-553-198-00	SWITCH, LEAF
SP101	8-927-223-00	SPEAKER (WOOFER)
SP102	1-503-488-11	SPEAKER (TWEETER)
SP201	8-927-223-00	SPEAKER (WOOFER)
SP202	1-503-488-11	SPEAKER (TWEETER)
T1	1-404-249-00	COIL, FM
T2	1-406-040-00	COIL (OSC)
T3	1-404-552-11	TRANSFORMER, IF
T701	1-448-278-11	(E).....TRANSFORMER, POWER
T701	1-448-279-00	(US,Canadian)...TRANSFORMER, POWER
T701	1-448-342-00	(UK).....TRANSFORMER, POWER
T701	1-448-343-00	(AEP).....TRANSFORMER, POWER
TM301	1-536-705-00	TERMINAL BOARD (SP EAKER OUTPUT)
X301	1-527-948-00	VIBRATOR, CRYSTAL
X601	1-567-301-11	OSCILLATOR, CRYSTAL

ACCESSORY & PACKING MATERIAL

Part No.	Description
1-526-565-00	(E2)...AC PLUG ADAPTOR
1-551-235-00	(E2)...CODE, POWER (DK-51) 2P
1-557-652-11	CORD, CONNECTION (SPEAKER)
3-527-213-00	LABEL, SERIAL NUMBER
3-760-375-11	(E,AEP,UK)...MANUAL, INSTRUCTION
3-795-308-51	(E2)...INSTRUCTION
3-881-644-00	PEOTECTION BAG
4-910-263-01	CUSHION (FRONT)
4-910-264-01	CUSHION (REAR)
4-910-265-01	CUSHION (UPPER)
4-910-297-01	(E,Canadian,AEP,UK)...INDIVIDUAL CARTON

The components identified by shading and mark **A** are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque **A** sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Sony Corporation